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THE WORLD OF AMIGA

WIN great prizes p12

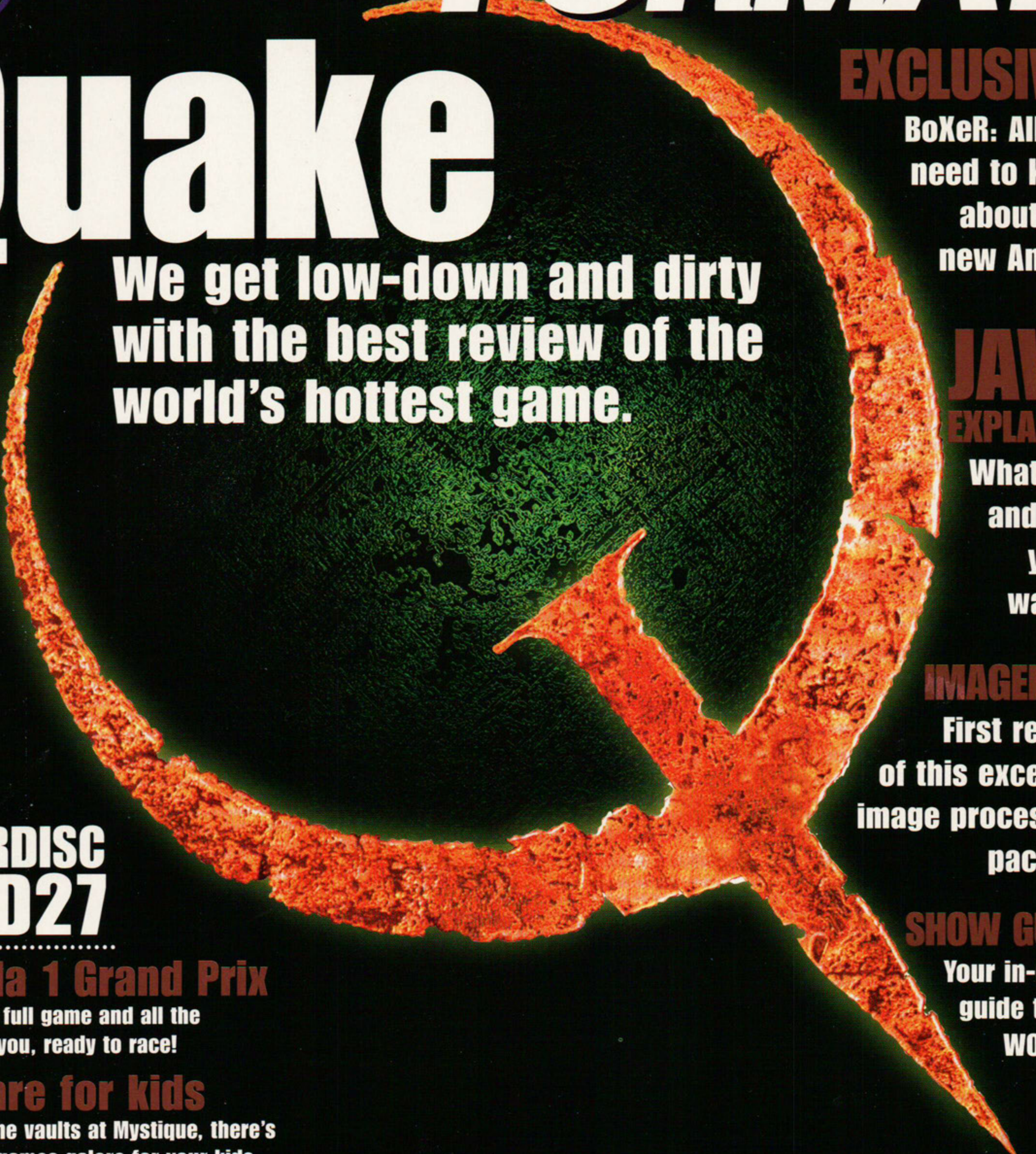
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All You Need For Internet And Comms!

netconnect v2 £59.95

NetConnect v2 is the easiest and most comprehensive Internet compilation designed to enable any Amiga user, from novice to expert level, to get onto and use the Internet. Based around 11 commercial programs (including the Contact Manager), and worth over £150 if bought separately, you are given all you will need to get the most from the Internet. By using the new Genesis Wizard, a user should be able connect to the Internet in a matter of minutes. Ideal for both an Internet or local area network connection.

11 Commercial Programs within NetConnect v2!



AMITCP-GENESIS
NetConnect v2 users will be the first people to use this new TCP stack! Based on AmiTCP Pro, we have added a number of changes - new Wizard, MUI based dialler, multi-user support, 'events' control, status window (time on 'net, connection speed), new prefs.

MICRODOT-II
A superb combined email and newsreader within one GUI! Contains all the major features you would expect - MIME attachments, support for POP3/APOP, search function, multiple signatures, multiple user support, Arexx port etc.

AMIRC
Chat online with friends about topics, join conferences, organise mass meetings. The IRC is one of the most addictive elements of the Internet - AmIRC is the best Amiga IRC client.

AMTELNET
Telnet into remote computers (from anywhere in the world) - edit files on a computer in Germany from your Amiga, maintain directories for your web pages, check the status of the network, play online games.

AMTERM
AmTerm is a communications package which allows you to connect to a BBS, to another user (direct link), transfer files via a serial connection (Amiga<>Amiga, Amiga<>PC etc).

VOYAGER-NG
Voted the best Amiga web browser by CU Amiga - supports SSL for securing ordering, HTTP 1.1 (for the fastest web access) fastmem AGA support (use fast mem to store images) and very soon JAVA™, Javascript and AGA fastmem support!

AMFTP
AmFTP is the ultimate Amiga FTP client. Download/upload programs from any FTP site, also supports ADT to allow you to download the latest files from the Aminet and Archie to search FTP sites for files.

AMTALK
A direct chat client for the Amiga. Acts as an online answerphone service for people to leave messages. You can talk directly 'realtime' to friends on the Internet.

NETINFO
NetInfo is a cool tool for analysing the network and the people connected to it - 'finger' your friends to see if they are online, 'ping' servers to find the response speed.

X-ARC
X-Arc is the Amiga's answer to WinZIP™ - automatically decode LHA/LZX/ZIP files, edit the contents of these archives, create your own archives. Full integrates with NetConnect v2!

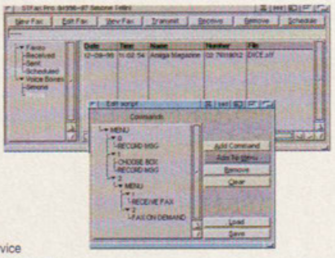
Plus much more..

- **Setup Wizard** - makes configuring your ISP a doddle. Choose your modem, enter some user details and then the rest of the process is completely automatic! Easy setup of more than one network interface - use more than one ISP or setup a Local Area Network (for the Siamese).
- **MIME Prefs** - Central MIME prefs interface means that you only need to setup file types once with on nice interface! This saves masses of time and effort (especially for beginners).
- **Control Manager** - A central control manager that allows you to store your favourite web and ftp sites, IRC servers/channels, friends, email addresses, fax numbers and then use them within various NetConnect modules - Voyager, Microdot-II, AmFTP and AmIRC! Also compatible with STFax Pro.
- **Multi-User System** - Use Genesis/NetConnect with more than one user (a family) and log in on startup, use your own preferences, your own account(s) within Microdot-II etc.
- **Programs are now keyfile based** (can be used with any TCP stack - Miami etc)
- **Extras pre-configured:** MIME types (CD Only), datatypes (CD Only), online help files etc
- **Dock bar** - allows you to create multiple dock bars with point and click ease - just drag the icons you have created into the icon bar! NetConnect v2 is pre-setup with its own icon bar for ease of use.

NetConnect v2 CD [contains many extras: datatypes, MIME types (for www browsing) and much more]	£59.95
NetConnect v2 Floppy Disks [only contains the core programs & online help documents]	£59.95
NetConnect v2 Upgrade from v1 [registered NetConnect v1 users only]	£call

stfax professional (new version 3.2) £29.95

STFax Professional is new commercial fax and voice mail program which enables you to use your Amiga as a digital answer machine, send and receive faxes from most Amiga programs and setup a mini-BBS. Ever wondered who companies manage to create their voice based operator system? You can do this at home! 'Press one to leave a message for Mike or press two to leave a message for Sue'. STFax is also ideal for the small business owner: setup a fax on demand service (so customers can receive information about your products 24 hours a day), advanced message box system for the employee's, log callers via caller-ID, control other programs etc. New v3.2 offers you even more powerful voice features, including:

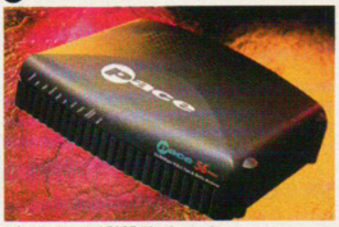


- **Full Fax Features:**
  - **Full Fax/Modem Class (1, 2, 2.0) Support**
  - **Phonebook** - store all your fax and telephone numbers
  - **Scheduler** - store fax messages to send at specified times
  - **Broadcasting** - send one fax to more than one recipient
  - **Reports** - quickly see when a fax was sent and received
  - **Printer Driver** - redirect all print-outs to a fax file (print from Wordworth, Pagestream, Final Writer, a text editor etc!)
  - **Fax Viewer** - view outgoing/incoming fax messages
  - **Fax Forward** - forward faxes to another machine
- **Advanced Voice Features:**
  - **Advanced Digital Answer Machine** - unlimited storage space
  - **Multiple-User** - assign voiceboxes to individual users. A family could have a voicebox per member and receive their own voice messages.
  - **Advanced Voice Scripting** - create your own voice network/fax on demand service
  - **Use the Modem as a Telephone** - make and receive calls via STFax Pro and your modem
  - **Remote Access** - listen to your messages from an external source. ie. from another phone or even country!
  - **Caller-ID** - see who is calling you (number and name of caller), choose to intercept the call or allow STFax to auto-answer, see who has left a message and 'reply' to the caller via the modem, attach a personal greeting to a specific phone number and only that person hears the message.
  - **External Program Control** - start an arexx script when an incoming call is detected or when the caller has hungup and control other programs. A music player could pause for an incoming call and then continue when call has ended.
  - **Call Screening** - blacklist phone numbers. Sick of sales people calling after 6pm? Nuisance callers? Blacklist their numbers (you can even blacklist 'withheld', 'unavailable' and 'international' numbers) so STFax either ignores their call or simply plays a custom greeting "sorry, this household does not welcome cold sale calls"! You can also set priorities per caller - STFax notices an important caller, it plays a warning sound.

high quality modems from..£69.95

Choose from three high-quality **branded** modems - the top of the range, award winning PACE 56K, the new PACE 'Solo' 56K or the middle of the range Dynalink modem. Both come with a five year warranty. The PACE modem also ships with free lifetime technical support, UK caller ID (only modem available which supports this), a superb speakerphone, conferencing feature, volume slider, easy to understand LED's and non-technical, easy to read documentation. The PACE is currently the best 56K modem you can buy, virtually winning every single modem review in the PC, Internet and Mac press. All PACE 56K modems are now v90 shipping ready - the agreed standard for 56K connectivity. Why not treat yourself to the brand new PACE 'Solo'? The 'Solo' be used standalone from your Amiga. Want to go on holiday but need to receive fax and voice messages, but don't want to leave your Amiga running? The 'Solo' is the answer.

pace External 56K Modem



- Quality branded PACE 56 voice modem
- v90 ready (new 56K standard)
- 5 year warranty, life time free technical support
- 56000 bps DATA/FAX/VOICE modem - true v34+ Throughput to 115,200 (230,400 for internal) BPS
- Group 3, Class 1 send/receive FAX (14.4)
- V.80 (video conferencing) capable
- Call Discrimination
- UK Caller ID (unique to PACE modems)
- 10 LED's for full status monitoring
- Analogue Simultaneous voice and data (A.S.V.D.)
- Speakerphone for hands-free operation
- Mute button for secrecy
- Upgradable ROM chip
- On/Off switch to rear of unit
- Volume slider for speakerphone control
- Includes headphones/microphones - voice control
- Serial cable included (with 9 & 25pin connectors)

pace 'Solo' 56K Modem



The PACE 'Solo' 56K modem replaces your existing fax, answermachine and modem. It can work independently from your Amiga (so you can turn your computer off to receive messages, if you prefer). It contains the features listed to the left and includes:

- Full specification fax/voice answer machine with message replay, time stamping, remote retrieval of messages all operational in stand-alone mode.
- Stored messages accompanied by time, date and caller-id where applicable.
- On board memory stores any combination of approximately 30 minutes of speech or 30 pages of faxes.
- Group 3, Class 1 and Class 2 FAX (14.4)
- 1 expansion bay with 2 sockets for flash memory expansion modules.
- Memory expansion options upto 32Mbits.
- 5 backlit function keys, 11 function keys

PLEASE NOTE: PACE 'Solo' modem available 18th May. Limited UK stock, order early to avoid disappointment.

Dynalink 33.6K External Voice/Fax/Data Modem	£69.95
Dynalink 56K External Voice/Fax/Data Modem	£89.95
PACE 56K External Voice/Fax/Data Modem	£129.95
PACE 'Solo' 56K External Voice/Fax/Data Modem	£189.95

modem pack options from..£79.95

Various money saving packs are available. These are all based on the Dynalink 56K modem. Packs based on the 33.6K or PACE 56K or PACE 'Solo' 56K modem available.

Code	Pack Contents	£ Prices
PK01	56K Modem & STFax	£ 99.95
PK02	56K Modem & NetConnect	£119.95
PK03	56K Modem & NetConnect & STFax	£129.95
PK04	56K Modem & NetConnect & Hypercom1 & STFax	£164.95
PK05	56K Modem & NetConnect & Hypercom3Z & STFax	£189.95

DEDUCT £20 for a Dynalink 33.6K Modem (instead of the Dynalink 56K)
ADD £40 for a PACE 56K Modem (instead of the Dynalink 56K)
ADD £100 for a PACE 'Solo' 56K Modem (instead of the Dynalink 56K)

- All packs come with one month free connection to Demon Internet and/or UK Online
- Choose between the CD or Floppy disk version of NetConnect with your modem pack

miscellaneous

	By Disk	By EMail
Miami - TCP/IP Stack for the Amiga	£28.00	£26.00
Voyager Next Generation	£22.00	£20.00
Microdot-II	£20.00	£18.00
AmIRC	£20.00	£18.00
AmFTP	£20.00	£18.00
AmTalk	£17.00	£15.00
X-Arc	£14.00	£12.00
AmTelnet + AmTerm Package Deal	£20.00	£18.00

- *5% Discount when 2-4 Vapor products are bought, 10% Discount for 5+*

high speed serial cards (new models!) from.. £44.95

The ***Hypercom*** range of high-speed serial cards offer your Amiga the fastest connection to the Internet, for comms and fax transfers. Available for the Amiga 1200, A1200 Towers and Zorro-II/III based machines (Zorro version suitable for A1500/2/3/4000 or a A1200 tower).

Model	Machine	Specifications	Price
Hypercom1	A1200	1 x 460,800bps highspeed buffered serial port	£39.95
Hypercom3	A1200T	2 x 460,800bps highspeed buffered serial, 1 x 500K bytes/sec parallel port	£79.95
Hypercom3Z	Zorro-2/3	2 x 460,800bps highspeed buffered serial, 1 x 500K bytes/sec parallel port	£74.95
Hypercom4	Zorro-2/3	4 x 460,800bps highspeed buffered serial ports	£89.95

internet informer/extra information

Still unsure about connecting to the Internet? Want more information? Confused by all the acronyms such as 'ISDN'? Confused about the costs? Wondering whether your Amiga can access the Internet? No need to worry any longer - we have released issue 2 of our 'Internet Informer' for Amiga users. A leaflet that offers you all the information you require in order to get your Amiga onto the Internet. Modem choices, software that is available, service providers for the Amiga, questions and answers. It also contains information about NetConnect and what we can do to get you onto the Internet. For your free copy, call us or write to us.

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Month **In View**

Nick Veitch has his ear to the ground, shoulder to the wheel, back to the wall and nose to the grindstone. Ouch!

Usually, I like to think that I'm a good listener. I am more than capable of spending time trying to understand the other person's point of view. Unfortunately, to do that effectively, the other party has to communicate with you. There's no point in listening when there is nothing to hear, and all we have heard from Amiga Inc. in a long time is silence.

Things look set to change though, and the turning point could well be upon us. Amiga Inc., certainly at this moment in time, are expecting to be able to make a major announcement at the forthcoming World of Amiga show. Of course, if you can't make it, we'll be providing a transcript in the next issue. If you can attend, it may just make your journey worthwhile.

If you're still unsure, look at our show guide which finishes a specially extended news section this month. It has details of the major exhibitors and some of the events taking place.

One exciting development sure to be there somewhere is the BoXeR. Ben Vost travelled all the way to Milton Keynes to bring you a special report and interview with its creator in this issue.

But it isn't all hardware and future developments this month (though we do have reviews of loads of other stuff, including *ImageFX3*), there are some great games too! Possibly the most exciting is *Quake*. You can read our extensive review, starting on page 32.

You can also have plenty of fun with our excellent full game this month*, *Formula 1 Grand Prix*! Zip along to our guide to getting started, beginning on page 26.

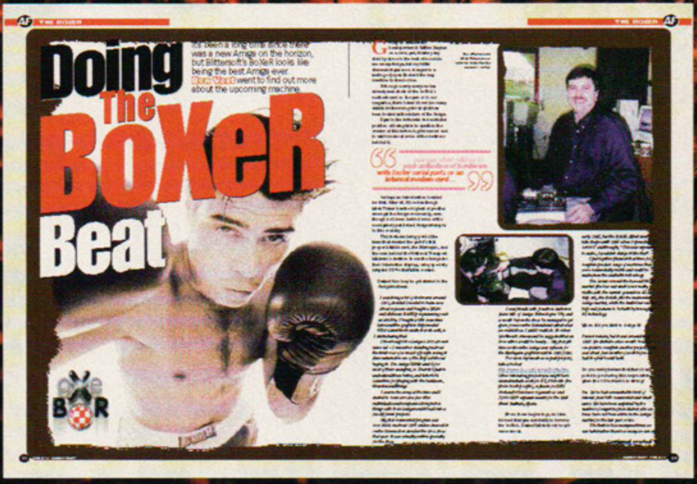
*Due to licensing restrictions, F1GP is not available in Canada, Japan, South Africa or the U.S.A.



Nick Veitch
Editor



WORLD OF AMIGA SHOW '98 PAGE 13
Step this way for your guide to the greatest show on Earth! Well, in Hammersmith anyway. All you'll need to know about who'll be where, doing what.



BOXER EXCLUSIVE PAGE 18
Find out what drove Mick Tinker to design the BoXeR, and find out how this new Amiga could revolutionise the platform.



MICROPROSE F1GP PAGE 26
Find out how to run this classic, but still unbeatable, Formula 1 racing simulator in our special feature, compiled by Oliver Roberts.



QUAKE – REVIEWED PAGE 32
The hottest game ever is now available for your Amiga. Find out whether your Amiga is hot enough for it, and what our team thought of the game.

AMIGA FORMAT Contents

ISSUE 111 JUNE 1998

AF NEWS

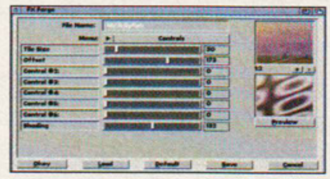
AF REGULARS

AF CREATIVE



Full 32-colour icons in all their glory, courtesy of *NewIcons*.

AF SERIOUSLY AMIGA



This dull screen can produce great effects...

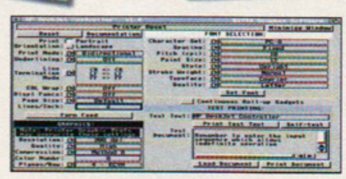


The expensive digital camera – but is it the best?









The Deskjet 400L – it doesn't go 'thunk'.



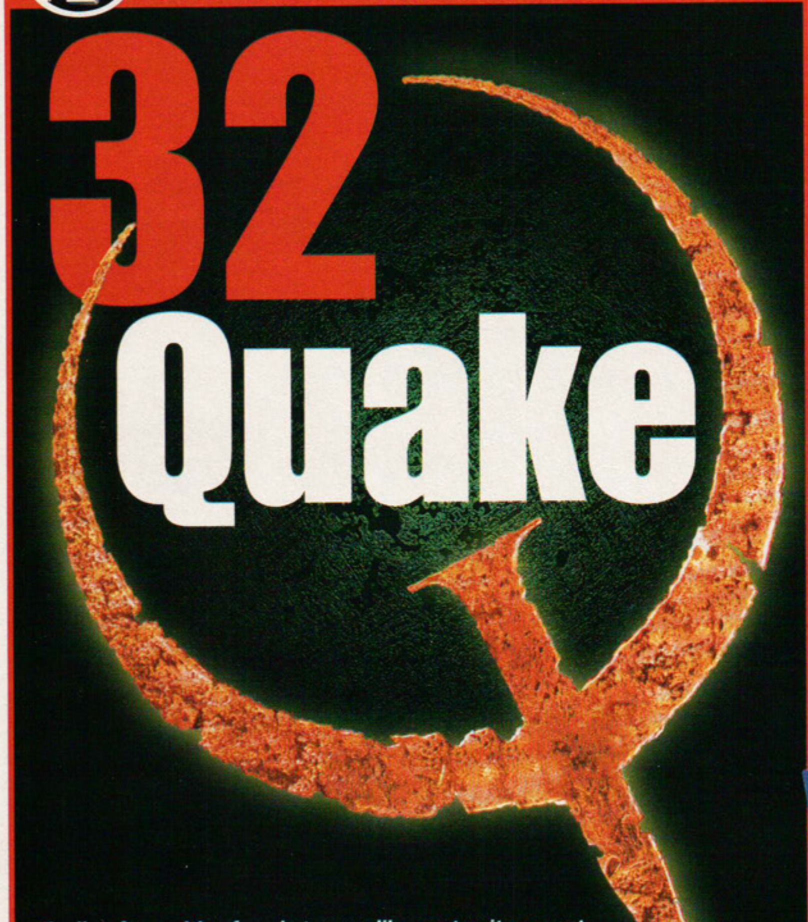
The new interface of this updated version.



DS2 – an easy to use illustration package.

AF COVER STORY

32 Quake



Finally, after waiting for what seems like an eternity, we get to play the full, complete, approved, Amiga version of *Quake*. Read our exclusive four page review, starting on page 32, and find out if this game really is going to save the Amiga software scene...

AF CD-ROMS

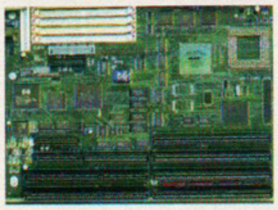


*Not available in Japan, Canada, South Africa and the USA.

AF COVERDISKS







Could this be the best Amiga ever made?





Cars, cornering and chicanes explained.



AF SCREENPLAY



AMIGA News FORMAT

WHAT'S UP?

World of Amiga show
UK event of the year looks like a good 'un.

NetConnect 2 – finally!
The long-awaited software suite hits retail.

Half-price DU
The great astronomy package gets chopped.

Key figures line up for show

Once again, there has been a tremendous amount of support for the only official UK Amiga show from some of the key figures in the Amiga market. Pretty much every player in the UK Amiga scene has booked a stand to demonstrate their latest hardware and software.

The support is international too, with developers such as Greg Perry of GP Software (creators of Directory Opus), a deputation from Haage and Partner (the people behind *StormC*, *WarpOS*, and *Art Effect*) and Kermit Woodall of Nova Design (creators of *ImageFX*) attending the event.



New hardware like Power's A5000 and Blittersoft's BoXeR should be on show, if not available to buy.



> *... Amiga Inc. have been suggesting that they will make a major announcement at the Novotel.*

Last year's show took place amidst scepticism that such an event was viable, but it turned out to be a huge success. Many of the dealers who did turn up soon found themselves running out of stock (including *AF*!), and it proved to be an informative and useful trip for the majority of visitors, who received the news about Gateway's purchase of the Amiga first hand.

This year the show could be just as important, as Amiga Inc. have been suggesting that they will make a major announcement at the Novotel. The exact nature of this announcement has been cloaked in secrecy and it seems unlikely that any more details will leak out before the event itself. Show attendees will be amongst the first to hear what Amiga Inc. have to say.

And, once again, many of the companies attending will have new products to demonstrate, including a first look at the InsideOut card, Power Computing's A5000, *Foundation*, the BoXeR and Vulcan's *Genetic Species* amongst other things.

With this level of support, it seems that the World of Amiga show has certainly established itself as a defining event in the Amiga calendar. It runs from May 16th-17th at the Hammersmith Novotel, London. Tickets are available on: (01369) 708029.

MAKING A SONG AND DANCE OF IT

Amiga International, the German Amiga subsidiary headed by Petro Tyschtschenko, will be making its own unique contribution to the World of Amiga show this year – in the form of an Amiga theme tune.

Backed by a troupe of dancing girls, a professional artist will be launching the tune on the main stage of the show. CDs of the new theme song will be available, featuring various mixes of the track and a special introduction by Mr. Tyschtschenko.

If you are coming to the show, why not enter our special competition to win an autographed copy of this unique CD? Full details can be found on page 12.



It's the Amiga theme tune, pop pickers. It's apparently going to get played on the radio all over the world!

NetConnect ready!

Active Technologies will finally release the CD version of *NetConnect v2* in May, and it should be available at the World of Amiga show.

There have been many changes and additions since the previous CD release. It will ship with a new TCP stack called "*Genesis*", with the kernel based on the original *AmiTCP Professional. Genesis* will allow dialup Internet access as well as local area networking or both (due to its unique ability to open multiple interfaces), ideal for the Siamese user.

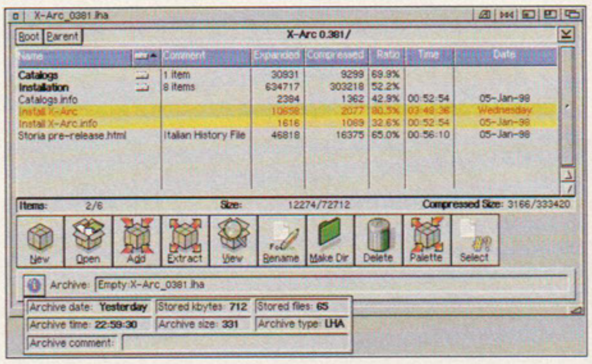
X-Arc is another new addition. Similar to *Winzip* on Windows or *Stuffit* on the Mac, it brings advanced archive management to the Amiga via a central control interface. *X-Arc* integrates into *NetConnect v2* via the central MIME-type interface. Download an archive from the Internet (via *Voyager, AmIRC, Microdot-II* or *AmFTP*) and the archive is passed automatically into the *X-Arc* main window. Here you can edit, view, copy and run any of the files from within the extracted archive.

Also included within the CD is *AmTalk* and a central Contact Manager which stores all your favourite web and FTP sites, IRC channels and friends' details. This contact information can be accessed by the other software within *NetConnect v2*.

NetConnect v2 is available for £59.95 from Active Technologies. *Genesis* and *X-Arc* can be purchased separately (if you don't want to purchase *NetConnect v2*).

For more information, call Active on (01325) 460116.

X-Arc. Like *WinZip* only better because it's on your Amiga.



GTI CHARTS

TOP TWENTY AMIGA CD-ROMS

1 . . . . CD. . . . . Aminet Set 6
2 . . . . CD . . . . Aminet 23
3 . . . . CD . . . . Amiga Format CD 25
4 . . . . CD . . . . Amiga Format CD 24
5 . . . . CD. . . . . Aminet 22
6 . . . . CD. . . . . PrintStudio Pro
7 . . . . CD . . . . Elastic Dreams
8 . . . . CD . . Workbench Designer 2
9 . . . . CD. . . . . Aminet Set 5
10. . . Disk . . . . Oxyron Patcher
11. . . Disk . . . . TurboPrint Pro 6
12 . . . CD . . . . Aminet Set 3
13 . . . CD. . . . . Wordworth 6 Office
14 . . . CD . . . . Scala MM 400
15 . . . CD. . . . . Tele-Info vol 2
16 . . . CD . . . . . . Personal Paint 7.1
17. . . Disk. . . . . Miami v3.x
18 . . . CD . . . . Amiga Format CD 23
19 . . . CD. . . . . Personal Suite
20 . . . CD . . . . Aminet Set 4

GTI are Europe's largest distributor of Amiga CD-ROM titles.

Universe at half price

While the world waits to find out whether Syzygy will be releasing version 2.0 of its Gold award-winning software, *Digital Universe*, the company has remastered the last version for re-release.

Digital Universe 1.03 originally came on a very unwieldy 14 floppies, with a huge and very detailed manual. This was great, but proved bulky, driving the price up for exports outside their home territory of Canada. The "digitally remastered" version is not going to come with the *Encyclopaedia Galactica* and instruction manual on hard copy. Instead, it will come with them as just a pair of AmigaGuides, which weigh much less.

There is even more good news for UK residents as, thanks to the strength of Sterling, the Can$75 offer price translates into a little over £30!

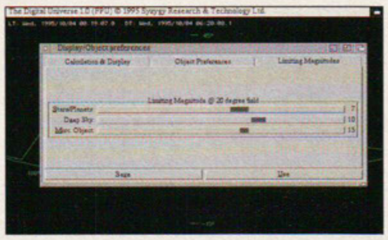
Even better news is that the purchase of the CD-ROM re-release will count towards a purchase of version 2, if it appears. This means the full version 2 will just cost a further Can$75, instead of the full Can$150 price.

Syzygy are still making up their minds whether version 2 will be released. If you have Internet access and would like to help them make up their minds, visit their website and fill in the survey at http://www.syz.com/DU/Amiga2.html.

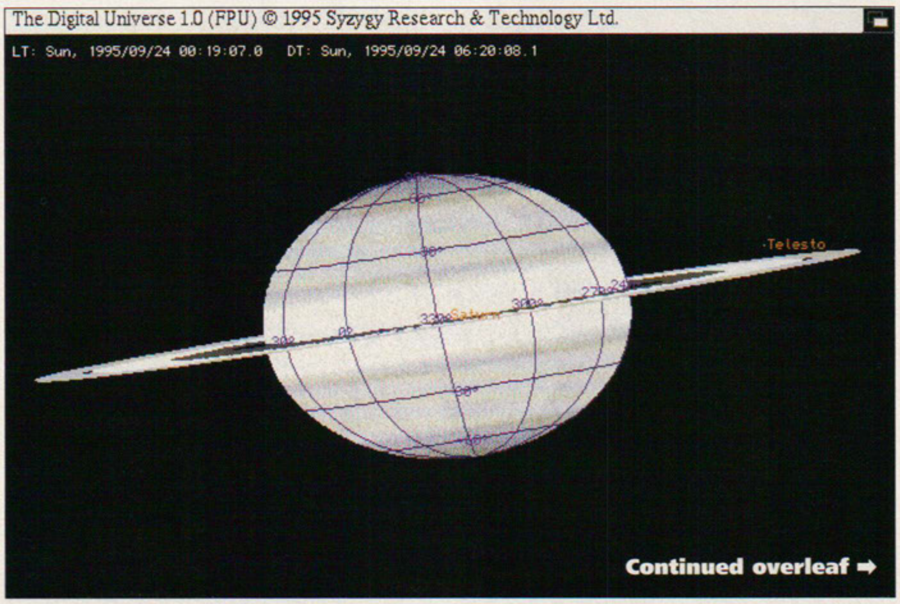
Internet-connected readers in the UK may also like to contact Bill Eaves (bill.eaves@zetnet.co.uk).

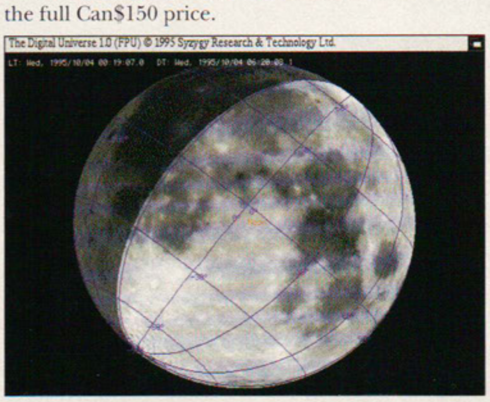
Bill is a *Digital Universe* fan who is currently trying to arrange a bulk order of CD versions of the software for the UK, thus making sure that even further savings are made!





The *Digital Universe* is smashing and very cheap. If popular, it will mean an even better follow-up.





Continued overleaf ➡

Tornado 3D upgrades, NEW DEMO

ON THIS MONTH'S CD AFCD27:Ben_Speaks

Eyelight, the Italian developers, have announced a free upgrade for registered owners of their 3D modelling system, *Tornado 3D*. The upgrade, which takes *Tornado 3D* to version 1.5 includes a mixture of bug fixes and new features including:

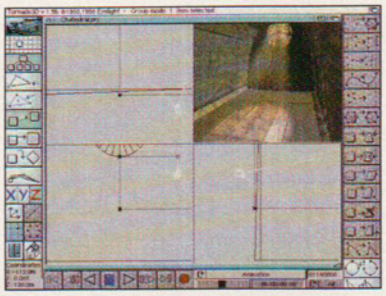
- Freeform deformation cages for object morphing.
- Spline-skinning, allowing alternative methods for generating new objects.
- Displacement mapping for true surface geometry deformation effects.
- Improved depth of field and motion blur control.
- CyberVision64/3D support, for much faster preview rendering.

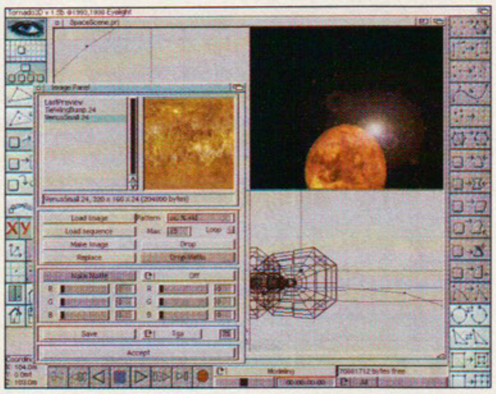
A review of this software is still pending and should appear in *Amiga Format* shortly, so keep a look out.

In the meantime, a new demo of the latest version has also been prepared and is available for download via distributor Haage&Partner's website at http://www.haage-partner.com and is also available on our CD, in the H&P website. To get to it, start Ben_Speaks and go the the websites page.

Although not fully functional, if you've tried previous demo versions you will see that if you have a CyberVision 3D the preview window is updated much quicker. This is because Eyelight have actually programmed for the ViRGE chip – the first commercial programmers to do so, to the best of our knowledge. Try it for yourself!







It's fast and it's in 3D and you can try it for yourself with the demo on our CD!

Talking heads

What have the *Amiga Format* staff been doing this month?



Things to look forward to at the show: Hordes of you, our loyal readers, expressing your gratitude for our hard work in the form of long, cold, dark drinks.
Favourite type of chocolate: Any I haven't had to buy myself.



Things to look forward to at the show: Meeting you lot, mostly again. Seeing the BoXeR in action and, of course, drinking with all of the other exhibitors.
Favourite type of chocolate: Lindt 70% Plain Chocolate.



Things to look forward to at the show: The bar, Newcastle playing in the cup final and, erm, the bar...
Favourite type of chocolate: Orange Toffee Crisps, but you can't get them now so I'm being weaned onto Nestlé Crunches.



Not going to the show because: Frankly, I'm just far too lazy. I would have to get up before lunchtime at the weekend, and nobody invited me anyway.
Favourite type of chocolate: That's solid food, isn't it? Never touch the stuff.



Not going to the show because: I shall be recovering from a well deserved holiday. In fact, the sooner I get this page laid out, the sooner I can bugger off out of it.
Favourite type of chocolate: Kinder Surprise.



Not going to the show because: I'll be far too busy writing all the reviews for the next issue, while everyone else is having fun.
Favourite type of chocolate: That which is found on the top of 880k formatted McVitie's Digestive biscuits.

New version!

After we complained to *ImageFX* authors Nova Design about the problems we were having with the version of their software they'd sent us for review, they told us that the patch that they've put up on their website solves many of the problems we found with the program. The patch will be included with the UK version of the program, available from Wizard Developments, as standard.

As a result, the problems with scroll bars and the general instability of the program are much improved, leading us to revise our original opinion of the program considerably.

We feel that it's only fair to up the score by a good 8%, giving it a final score of 88%. It still misses out on the Format Gold award for being too awkward for newcomers to use, but it's getting better all the time.

If you'd like to get a copy, give Wizard Developments a call on 0181 303 1800 or visit their website at http:// www.wizard-d.demon.co.uk to get more information about this excellent bit of software.

Competition Winners

Loads of prizes, loads of winners for our competitions – are you one of the lucky ones? All of the prizes should have reached you by the time this issue hits the shops, but may take longer for overseas winners...

Quake

Answer, The Richter Scale

Winners

- **Nathan Rhodes**, Amesbury, Wilts
- **Alex Vakkas**, Athens, Greece
- **Sean Sherry**, Lusk, Co. Dublin, Ireland
- **David Bateman**, York
- **J. Yarker**, Hessay, York
- **Les Smith**, Hull
- **Matthew Gathercole**, Aldershot, Hants
- **T. Laughran**, Wolston, Nr. Coventry, Warks
- **Greg Howson**, Guildford, Surrey
- **Chris Seward**, Wirral, Merseyside

007 Competition

Answer – Joseph Wiseman (as Dr. No)

Winners

- **Paul Finkhouse**, Norwich, Norfolk
- **Paul Barrick**, Stanground, Peterborough
- **Gerald Houghton**, Irthingborough, Northants
- **Brian Reynolds**, Queens Park, London
- **Jeppe Ravn-Grove**, Brabrand, Denmark
- **Clive Longhurst**, Horsham, West Sussex
- **R. Steele**, Brading, Isle of Wight
- **Roger Buckley**, Sheffield
- **Hassni Malik**, Epsom Downs, Surrey
- **Andy Clifford**, Birmingham

Digiboy Keychain

Winners

- **Graham Johnson**, Bedworth, Warwickshire
- **David Longson**, Chesterfield, Derbyshire
- **Jas Parnell**, Bodmin, Cornwall
- **A. Tzitzas**, Dukinfield, Cheshire
- **Vasilos Karageorgis**, Athens, Greece
- **Heather McCoy**, Livingston, West Lothian
- **S. Costa**, Southport, Merseyside
- **E. A. Dornan**, Dunoon, Argyll
- **Robert Kersbergen**, Hoorn, The Netherlands
- **A. Metcalfe**, Runcorn, Cheshire

Epic giveaway

First prize:

- **Angela Hidderley**, Oldham

Second prize:

- **Christopher Phillips**, Berwick-On-Tweed

Third prize:

- **Alexi Tzitzas**, Cheshire

Runners-up:

- **Rose Rogers**, Kingsbridge
- **D.M. Fisher**, Folkestone
- **Lez Oxley**, Brighton
- **Trevor Salisbury**, Derby
- **M. Carrier**, Sittingbourne
- **Jenny Shotton**, Bolton
- **Barry Wilson**, Corby
- **C. Adler**, Woking
- **Adam Morris**, Great Massingham
- **Roy Collins**, Halesowen

AF Net Corner

Due to popular demand, this month sees the welcome return of this much-missed regular feature in *Amiga Format*'s news pages.

AMIGA INTERNATIONAL

http://www.amiga.de

The first page on our Internet hitlist is the newly revamped Amiga International page. This site is supposed to be the place where you can be sure of getting your facts straight about all Amiga Inc.-related matters, but it's quite often out of date. The addition of frames is somewhat gratuitous as they really don't aid navigation of the site, and while some of the animgifs are nice, they are all called forbidding names like "Don'tUseThis!.gif".



AMIDOOM

http://amiga.tc3net.com/doom/

This is another site recently revamped with frames, and again, they don't help with ease of use, unlike the previous, very-fast-to-load single page site.

Thankfully, there aren't too many images to further slow down the site, although previously the page was text-only. This is still the best resource for anyone wanting to find the score on the latest incarnations of the many *Doom* ports for the Amiga. Well worth a visit (and often featured on our CD).



Get all the latest *Doom* ports at this newly revamped site.

Diary

More shows for you globetrotters to visit:

International Amiga 98, May 29th-30th, Toronto, Canada.
http://www.randomize.com/ia98.html

AmiWest, July 11th-12th (Developer days 10th-14th July), Sacramento, CA, USA.
http://www.sacc.org/amiwest/

BSE 98, August 7th-9th, Diepenbeek, Belgium.
http://bse.base.org

California Computer Expo, August 20th-23rd, California, USA. Details to follow.

Live 98 – technology show, 24th-27th September 1998. Contact Blenheim Exhibitions (0181) 742 2828.

Computer 98, 13th-15th November 1998, Cologne, Germany. Details to follow.

BILL GATES HOIST ON HIS OWN PETARD!

The software event of the century (as Microsofties would have it) didn't go too well recently. It appears that Windows98 isn't really for everyone, especially if your name is Bill Gates and you're trying to give a presentation showing off its many new features and it decides to crash and not return from the dead.

The hapless Gates discovered to his cost, and to the amusement of the many people gathered to hear him talk at the Comdex Spring Convention, that the new version of his operating system isn't as stable as he has led people to believe.

Although the problems were widely reported on, Microsoft declined to confirm that the new version would start shipping at the end of July, saying that they had never stated the date given as the actual shipping date.

The software failed because, as a demonstration of its ease of use, a Microsoft employee plugged a scanner into the machine being used, whereupon it crashed and refused to boot again.

Fortunately for Microsoft, they did have another PC which could be used by Mr. Gates as a demonstration machine. Gates smilingly told CNN, "I guess we still have some bugs to work out. That must be why we're not shipping Windows98 yet."



No cream, just egg.

WIN! yourself one of twenty five copies of the new Amiga theme!

AF Competition!



The CD will have five tracks:

1. *Introduction with Petro Tyschtschenko's speech*
2. *Maxi Version*
3. *Maxi Version – instrumental*
4. *Acoustic version*
5. *Radio edit*

Amiga... *back for the future*



Rising up, like a phoenix from his sleep
Coming out, of the darkness and the deep
Be a part of the future, touch the light
We are back, mobilise us for our strike!

RULES

This competition is only open to visitors to the World of Amiga show between May 16th and 17th, 1998, at the Hammersmith Novotel in London, England. To enter, simply put your name and address on the form below and put it in the competition box on the Amiga International stand (stand number 114).

Even if you don't win, you'll be able to buy the CD at the show and £2 of every sale will go to the development and user group community.

Amiga International stand (Stand 114)

THE WORLD OF AMIGA

NAME: ....
ADDRESS ....
....
....

Welcome to...

The World of Amiga '98



Assuming you've had an Amiga for a while, you'll know that every May there's a big show in Hammersmith. This year is no exception. Follow us through the next couple of pages as we lead you through the myriad wonders that await you in the Hammersmith Novotel's dungeon – the traditional location for the show.

If, as is quite likely, you've bought this issue of *Amiga Format* on the day it comes out in the UK and you haven't made up your mind whether or not to attend, then do come. We'd love to see you.

If you are one of our many overseas readers, unable to attend just because of the sheer distance involved, we're sorry you won't be there but we promise to bring you all of the up-to-the-minute news from the show in our next issue, which will be on sale in the UK on Friday 12th June.

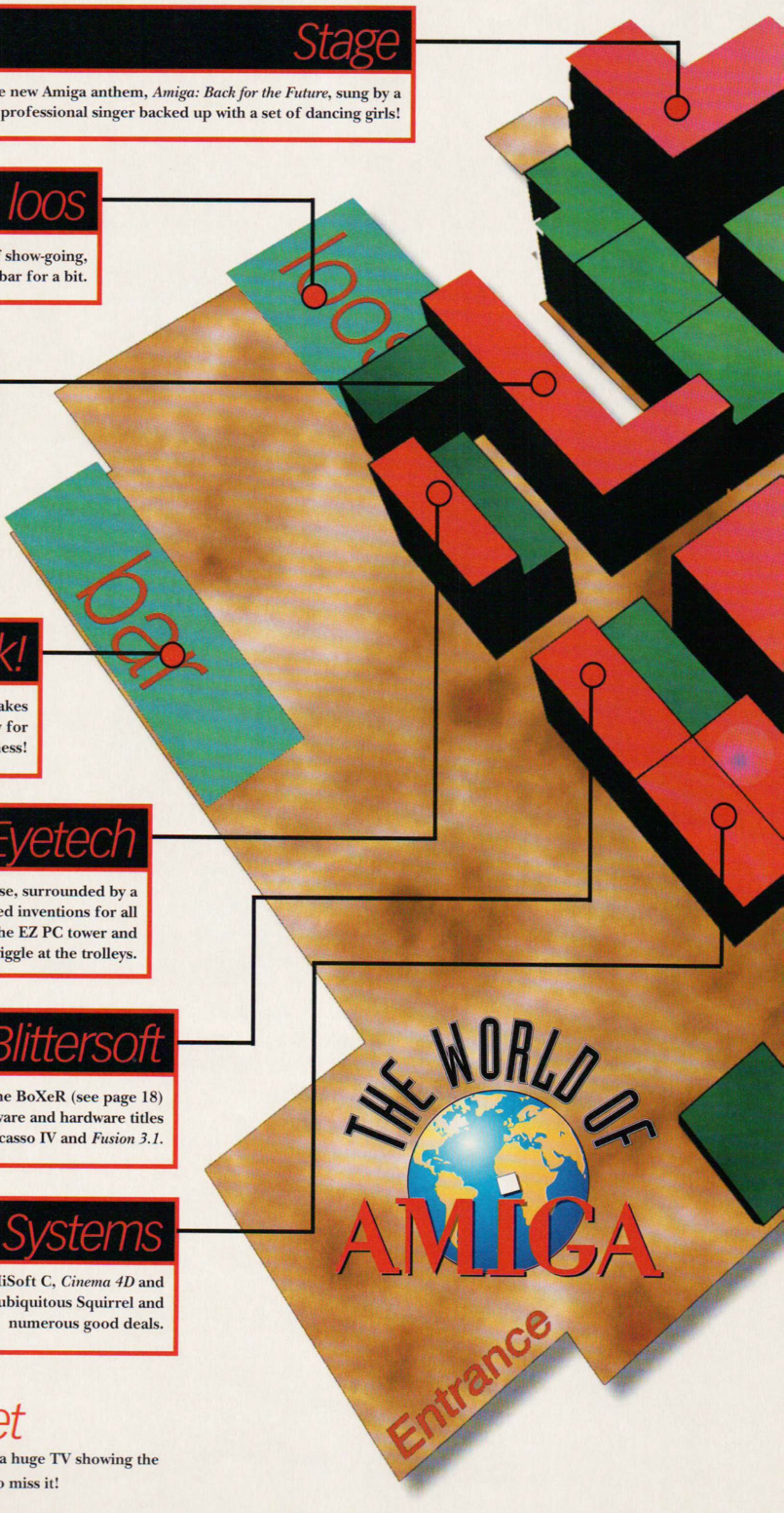
If you've got this issue and the show isn't over yet and you're still humming and haaing about coming, then don't hang about – ring the organisers on (01369) 708029 and book a ticket, or just show up on the door. Prices for admission are £7.50 for adults and £5.50 for kids, but you can be sure that you'll save at least that much money on the bargains to be had within.

Just before we begin to look at who's going to be there, cast your mind back to the same show last year, where Gateway made the shocking announcement that they had bought the Amiga lock, stock and barrel from Escom's liquidator and were planning great things.

It's been a year since then, with not much in the way of statements about the future direction of the machine. However, whispers say that the guys at Amiga Inc. have an announcement to make at this show, something that will affect every Amiga owner in the land – not my words, but what Joe Torre had to say to me last week, in the middle of April, when I wrote this. As I'm sure you'll agree, it's about time.

If you aren't going to go, you'll just have to wait for the next action-packed instalment of *AF* to find out just what's going on. And you'll miss out on the dancing girls, but for more news of them, turn the page...

Continued overleaf ➡



Stage

This is where you'll be able to hear the new Amiga anthem, *Amiga: Back for the Future*, sung by a professional singer backed up with a set of dancing girls!

Here be loos

Comfort breaks are an essential part of show-going, especially after propping up the bar for a bit.

149 Wizard Developments

This should be an entertaining stand, with Greg Perry from GP Software showing off a new version of Directory Opus Magellan, and with Kermit Woodall demonstrating Nova Design's new version of *ImageFX*.

Here be drink!

The bar. An essential for every show, which makes the toilets even more important. Get ready for overpriced beer and remember, we drink Guinness!

152 Eyetech

Here you'll find the inimitable Alan Redhouse, surrounded by a huge cluster of useful and wacky Amiga-related inventions for all occasions. Gasp in awe at the spectacle of the EZ PC tower and then giggle at the trolleys.

126 Blittersoft

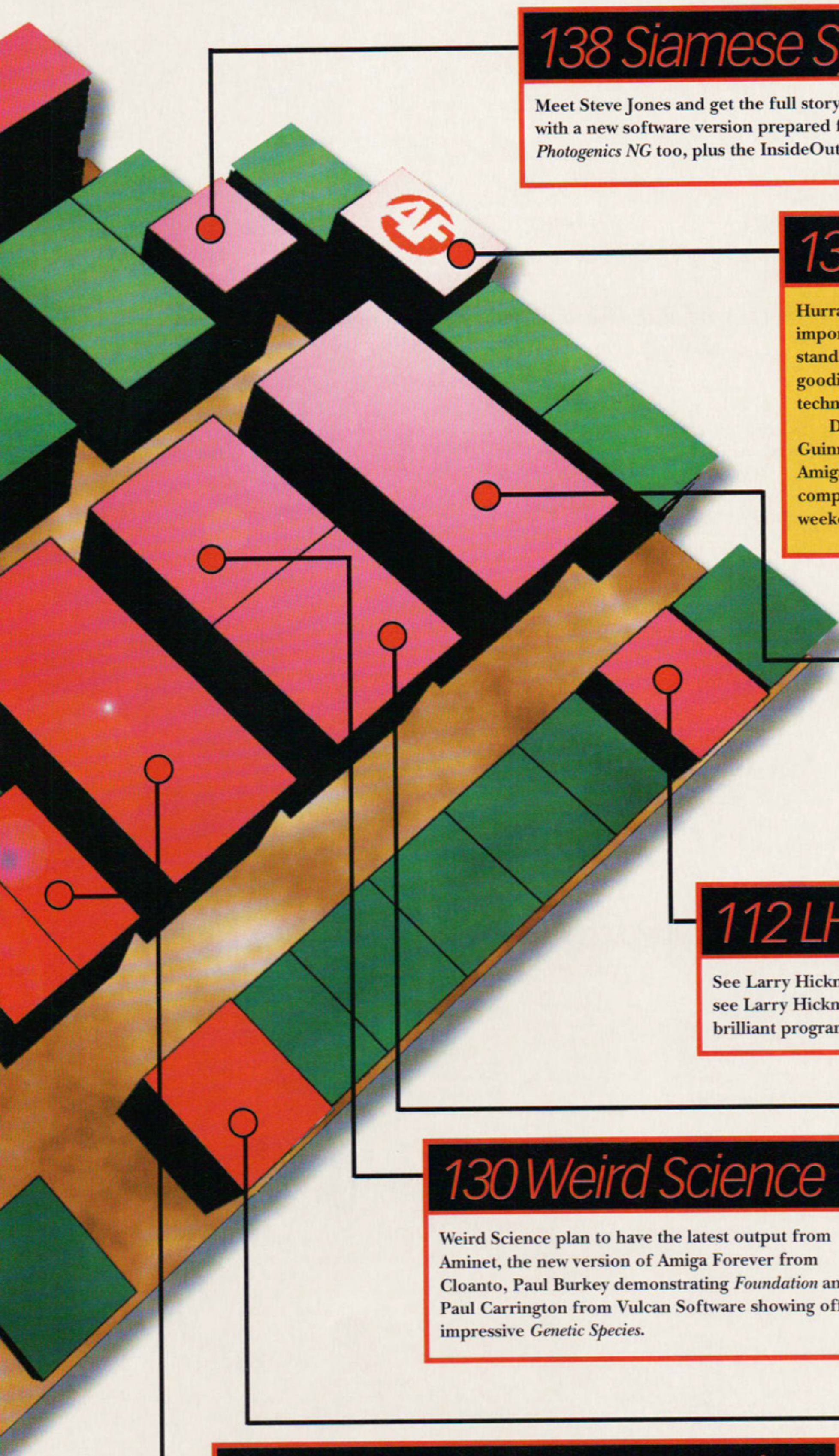
Blittersoft will have Mick Tinker presenting the BoXeR (see page 18) and will be showing off several new software and hardware titles including the Paloma TV tuner card for the Picasso IV and *Fusion 3.1*.

121 Hisoft Systems

HiSoft will have the very latest versions of HiSoft C, *Cinema 4D* and more on their stand, together with the ubiquitous Squirrel and numerous good deals.

Don't forget

Just off the floorplan there will be a room with a huge TV showing the FA Cup final, so you don't have to miss it!



138 Siamese Systems

Meet Steve Jones and get the full story on exactly what Siamese actually is, then walk away with a new software version prepared for the show. Paul Nolan might be there showing off *Photogenics NG* too, plus the InsideOut – working!

136 Amiga Format

Hurrah! You'll find what is undoubtedly the most important stand at the WOA here – it's the *Amiga Format* stand! Make sure you come and see us and get all sorts of goodies, along with the very best in impartial advice, technical help and more.

Don't forget that Nick and Ben like a pint of Guinness now and again and that we'll have people from AmigaSOC, ICOA and various software and hardware companies guesting on our stand throughout the weekend, so be nice to them too.

114 Amiga International, Inc.

Talk to the men and women behind our favourite machine and look on as the friendly fellows from Haage and Partner demonstrate their latest wares.

112 LH Publishing

See Larry Hickmott run, see Larry Hickmott play with *DrawStudio*, see Larry Hickmott sell loads of copies because it's an absolutely brilliant program.

116 Epic Marketing

Epic are bound to have loads of lovely goodies on their stand this year. You can expect to see *Shadow of the Third Moon*, *Elastic Dreams*, with the possibility of *Trapped III* and more.

130 Weird Science

Weird Science plan to have the latest output from Aminet, the new version of Amiga Forever from Cloanto, Paul Burkey demonstrating *Foundation* and Paul Carrington from Vulcan Software showing off the impressive *Genetic Species*.

106 ICPUG

Jon and Janet Bickerstaff will no doubt be on hand to answer all your Amiga queries and to sign you up for the oldest Amiga user group in the world.

118 - 120 Power Computing

Never ones to shy away from large stands, Power Computing will probably have the largest at the show to give them enough room to demonstrate all the great stuff they'll have, including the Power Tower and the A5000.

Eyetech's WoA'98 specials

A1200 PowerPC boards w/040/25/MMU/FPU - £238.95! Siamese RTG2.5 ethernet packs £199.95; Amiga DigiCam s/w - £39.95; DIY EZ-Towers from £79.95!; 20xCDROM system - £99.95!!!; ; 030 /33 accel's from £49.95, w/4MB - £59.95; 19 Mips '040/25 £128.95; 39 Mips '060/50MHz £268.95; 20% off mem prices bought with accel.; LS120 /Zip £89.95; EZ-Twr/EZKey/Win95 kbd - £148.95

(New) AMIGA HEALTH WARNING

"A buffered IDE interface is essential to avoid overloading of the A1200's IDE port when adding extra devices" - John Kennedy - AF - 7/97

Don't be tempted to skimp. Preserve your Amigas health with IDE technology from Eyetech - *THE* IDE specialists. The Eyetech *EZCD-Mk4* fully buffered 4-device interface *with active IRQ pull-up* (AIPU) for high performance A1200 systems is now available.
For less-exacting systems our economy interface - the *EZCD-SE* - is available for *just £24.95 including licenced CDROM driver software* - see below. Its a small price to pay to preserve your Amigas health.



Amiga 1200 Magic Packs

- Direct to Eyetech from Amiga International Inc.

- Full UK specification with Kickstart 3.1/Workbench 3.1 disks and manuals, UK psu, mouse, mousemat and TV lead and 2MB graphics memory (in addition to any memory expansion included in the packs below).
- Fantastic software bundle including Wordworth 4SE,Turbocalc 3.5, Datastore 1.1, Photogenics 1.2SE, Personal Paint 6.4, Organiser 1.1, Pinball Mania and Whizz
- Hard drive versions come with Scala MM300 preinstalled
- Other options available - please ring. EZ-Tower options also available from £349.95

The new EZCD-SE economy 4-device buffered interface from Eyetech - Just £24.95



- Suitable for most medium performance A1200 systems.
- Comes with fully functional (non-shareware) CDROM s/w
- Upgrade to full EZ-IDE.software (if required) at £14.95 at time of purchase or £17.50 later.
- Trade up to EZCD-Mk4 i/f at full buying price (less carriage) within 30 days

Special World-of-Amiga '98 EZCD-Mk4 bundles - by post!

EZCD-Mk4 alone - just	£39.95
EZCD-Mk4 with 3x40 way and 13cm 44-way cables	£49.95
EZCD-Mk4 with full EZ-IDE s/w and 40- & 44-way cables	£59.95

Amiga Digital Camera Software

(from the author of ScanQuix3)



- Versions available for most popular models of Kodak, Olympus, Casio, Minolta and Fuji digital cameras.
- Picture transfer, camera control & slideshow options.
- Selectable serial device support for data transfer.
- Integrates directly with PPaint, DPaint, Pagestream, AdPro, Photogenics & with other programs via Arexx

CamControl software only	£39.95
CamControl & PortJnr i/f	£69.95

Eyetech Starter Pack

Diskette based system as above
Add an '030/33/MMU/FPU with 8MB for just £79.95 and/or a170MB HD for just £60.00

Just £189.95

Productivity Pack 2

170 MB hard drive system with software preinstalled 030/33/MMU/FPU with 8MB

Just - £329.95

PortPlus & PortJnr high-speed serial (460Kbd) and parallel (800KB/sec) ports for the A1200



PortPlus	- 2x serial & 1 x parallel -	£79.95
PortJnr	- 1x serial port -	£39.95
PortPlusZ3	- 2xS+1xP (Zorro 2 bus) -	£69.95

MiniTower CD Pack

1.7GB hard drive - 20-speed CDROM - '040/25 accelerator & 16MB - EZCD4 buffered i/f - EZ-IDE s/w - MiniTower with 230W psu - cables

Just - £599.95

Professional Pack 2

Full Eyetech EZ-Tower - EZ-Key i/f - Win95 k/b - 2.1GB HD - 20x CDROM - '040/33 accel & 32MB - EZCD4 buffered i/f - EZ-IDE s/w - cables

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Audio out 3.5mm jack	*Yes*	*Yes*	*Yes*
Gold phono audio jacks	*Option*	*No*	*Yes*
PSU type/rating	*20W ext'l*	*230W int'l*	*40W int'l*
PSU capability	*1 x CDROM*	*4 x CD/HD + A1200*	*1 x CDROM + 1 x HD*
Bays for extra HD/FD/CD's	*Yes*	*5 in total*	*Option (1)*
Upgrade option to 32-speed	*+£20.00*	*+£20.00*	*+£20.00*
U/g option to CDWriter & s/w	*n/a*	*+£269.95*	*+£269.95*
Cost with 20-speed mechanism	*£99.95*	*£119.95*	*£149.95*



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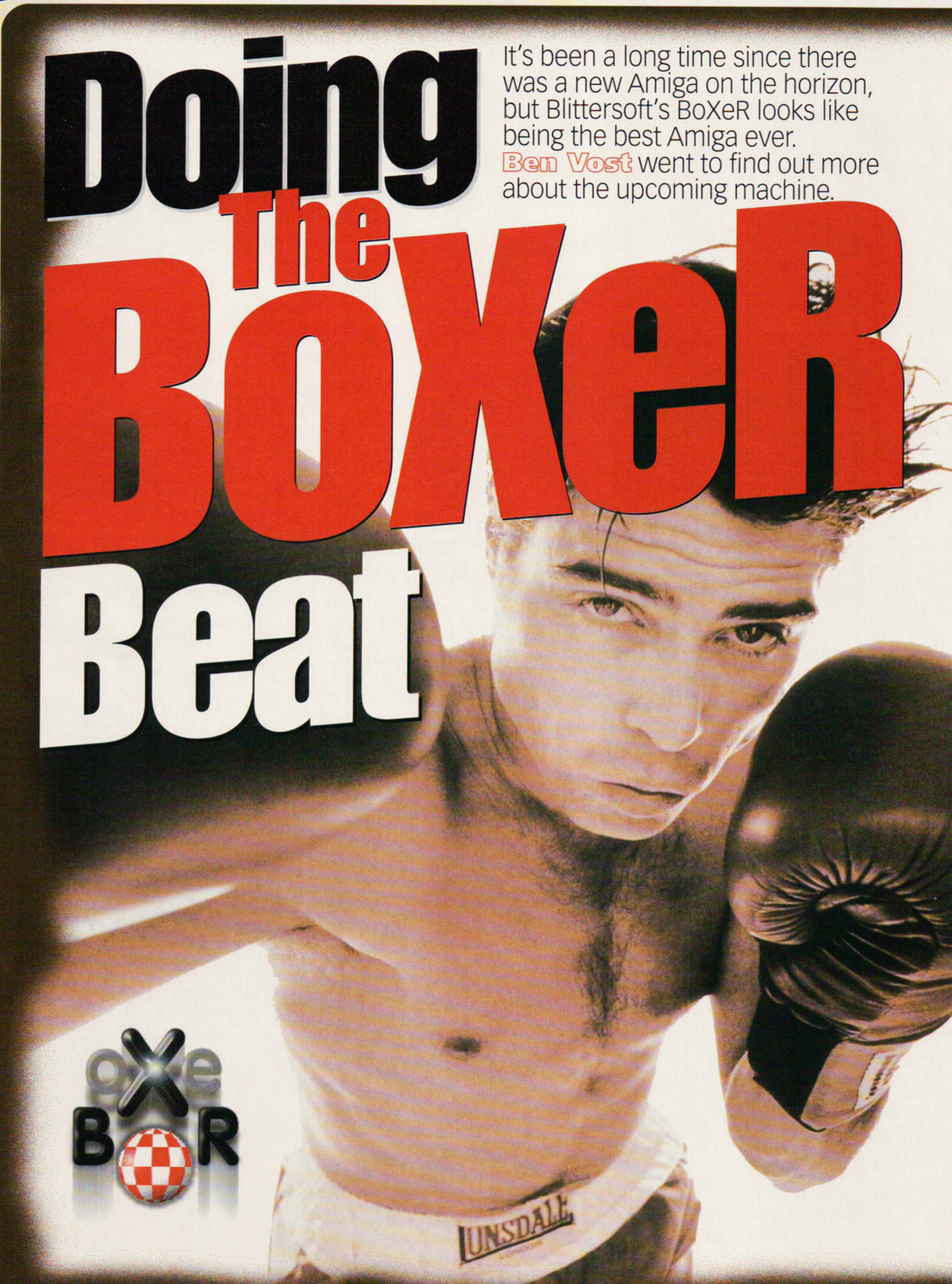
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EYETECH

Doing The BoXeR Beat

It's been a long time since there was a new Amiga on the horizon, but Blittersoft's BoXeR looks like being the best Amiga ever. **Ben Vost** went to find out more about the upcoming machine.



Going to Blittersoft's headquarters in Milton Keynes on a cold, wet, blustery day didn't put me in the best of moods to see a new Amiga, but my initial discomfort was soon changed to a feeling of joy as I beheld the new machine in front of me.

Although nearly everyone has already seen shots of the BoXeR's motherboard on the web or in our magazine, there haven't been too many details forthcoming about what has been touted as the future of the Amiga.

I was in the fortunate and exclusive position of being able to question the creator of this technological marvel and to ask him about some of the decisions behind it.



The effervescent Mick Tinker poses with his baby for the camera – smile!

"... you can start adding to your collection of hardware with faster serial ports or an internal modem card..."

Perhaps an introduction is called for first. After all, it's not as though Mick Tinker has the highest of profiles amongst the Amiga community, even though he's been behind some of the most widely publicised Amiga triumphs in this country.

This includes being part of the team that created the world's first proper 24-bit board, the Harlequin, and the man behind the National Transport Museum's decision to use the Amiga for their interactive displays, using specially adapted CD^{32}s that Mick created.

I asked him how he got started in the Amiga business.

I was doing a lot of electronics around 1981, decided I needed to learn more about software and bought a VIC20 and did some BASIC programming on it as a hobby. I bought a C64 some time later and the graphics chips needed 6502 Assembler to make it work well, so I started using that.

I then bought the Amiga A1000 when it came out – I remember standing in about the third row of a crowd of people seeing it demonstrated in one of the shops while out buying it. The Amiga RKMs used C for most of their examples, so I learnt C just to understand them better, and later 68K Assembler for playing with the hardware, libraries and things.

I was in the army at the time and I started to come across a few other individuals and companies doing techie things with their Amigas and it lead into a few different projects.

My first commercial program was **IconPaint** *in about 1986 and we demoed it on the Commodore stand at the WoA show that year. It was actually written specially for the show.*



I was friends with Jonathon Anderson (later MD of Amiga Technologies UK) and a month before the show he managed to get space for us on the C-stand and asked what we could show. I said I could do 16-colour Workbench screens and he suggested that an Icon editor would be handy... My first full-time work on the Amiga was software for the Harlequin graphics card in 1990/1991.

For more information on past projects, take a look at http://www.cix.co.uk/~index/Profile.htm *Other interesting projects you might have missed include work for BT, PhotoMe (the photo booth people), software for BBC Scotland's* **Catchword** *gameshow and 7,000 CD^{32} expansion units for the Wall Street Institute, Spain.*

From these beginnings, an idea formed that was eventually to become the BoXeR. I asked Mick about how it came about.

The Access & InsideOut were planned in early 1995, but the BoXeR didn't start to take shape until 1996 when I opened up the A4000T and thought, "This was expensive to make, I wouldn't design it like that".

I put together plans at that time for a complete product range of machines that were commercially viable and could be made from the available technology.

The Access covered the low-end Kiosk market (the low-end retail is not really viable with the current generation AGA chip set), the BoXeR fills the main retail Amiga market, while the InsideOut enables high-end features to be built by leveraging PC technology.

When did you start to design it?

I'm not certain, but it was around May 1997. We did take a two month break at one point to complete another project, so it was about four months of work before we had the first board built.

Do you really believe that there's any point in producing this new machine when the PC market is so strong?

Yes. We've had a remarkable level of interest from both commercial and retail users. We have been surprised by the number of enquiries from dealers who we know have not been active in the Amiga market for the last year or two.

The limit is how many machines we can build rather than how many we can sell.

Continued overleaf ➡

WHAT'S THE SPEC?

The BoXeR is technically very impressive. Here are just some of the features that'll be in the final version:

- 100% Amiga compatible.
- Baby-AT motherboard based on Amiga technology – fits in ANY standard PC desktop/tower case.
- Motorola 68040 or 68060 at 25-75MHz supported in a single processor socket.
- On-board 2Mb chip RAM.
- Four 72-pin standard SIMM sockets, allowing up to 2Gb fast RAM.
- Dual IDE hard disk interface with standard pitch 40-pin header.
- Flash ROM 2Mb, 32-bit wide. Used to provide Kickstart ROMs and resident modules.
- Floppy disk drive interface, operating as DF0:, including 0.5sec delay on RDY.
- CD-ROM audio input connector and mixer.
- Real-time clock, using NiCad.
- Keyboard port is a standard DIN connector for PC keyboard or Amiga keyboard (with auto-detection).
- Two 16-bit active ISA slots, in-line with four Zorro 3 slots.
- Two Amiga video slot connectors.
- Printer port, 26-pin header. Complete with signals missing from standard Amigas for scanners, Zip drives, etc.
- AV slot – provides audio, composite and RGB signals.
- RGB video (on rear AV board).
- Serial port 10-pin header.
- Joystick and mouse port, 10-pin headers.
- Audio header, 4x1 for internal CD-ROM connection.
- Floppy drive DF0:/DF1: header.

Key Design Points:

- The all-new, leading-edge design uses the AGA chip set for compatibility but has completely redesigned logic to achieve the highest performance and most flexible design.
- Supports 68040 or 68060 from 25MHz to 75MHz.
- Supports four standard 72-pin SIMMs for total fast memory of 2Gb.
- High-speed chip memory read/write technology which can boost access by up to 30%.
- Mounts in standard PC baby-AT case. (A huge selection of cases are available from a wide range of suppliers at the lowest price points.)
- Processor connector to support a low cost PowerPC upgrade (still in development). This expansion allows the on-board 680x0 to remain in place so that the upgrade is little more than a PowerPC on a card.
- MPEG/Genlock module with high quality output and broadcast quality genlocking (still in development).
- Has live, working 16-bit ISA slots to support low cost peripherals such as modems, Ethernet and soundcards.
- FlashROM allows software and hardware updates.
- CD-ROM File System in ROM allows booting from CDs.



Mick Tinker explains to a bemused Simon Goodwin that, "It was about this big until we hit it with lots of hammers, and now it'll fit into a PC case."

To help ramp up production volumes we will be working with Blittersoft to sub-license the design to other manufacturers.

The idea of a programmable logic chip on the motherboard is intriguing, but aren't you worried that it might lead to a new sort of virus that could disable the whole machine?

The motherboard is designed so that both software and hardware logic are stored in Flash ROM, allowing us to provide upgrades on a disk or over the Internet. To protect against accidental deletion and the risk of a virus, we have provided a write protect jumper on the motherboard.

By default, all motherboards will ship with the Flash write-protected. There is a feature in the design to protect the machine so that it is possible to recover from a virus or a failed update, which could happen if the machine was switched off part way through an upgrade.

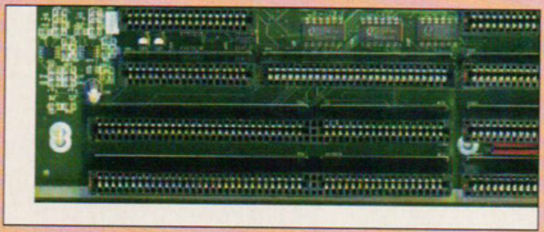
What are your thoughts on the upcoming DCE machine?

There is scope in the Amiga market for a variety of machines. I believe that the more machines manufactured, the larger the market will become. I wouldn't be doing myself justice if I didn't think the BoXeR was the best product in its market segment.

WHAT ARE ACTIVE ISA SLOTS?

Ever since the A2000 was first invented, the Amiga has had the unique ability to use cards intended for other platforms. The ISA standard is what the PC had to put up with for the first 10 years of its life, only to have it added to or replaced with VESA local bus (useless), EISA (no-one used it) and MCI (only IBM used it), and finally PCI (not bad, actually).

Every big box Amiga since the 2000 has had at least two ISA slots. However, they've never been usable except under very particular circumstances, usually involving a "bridgeboard" that sat in a Zorro slot, as well as taking up one of the precious ISA slots. Mick Tinker has modified the Buster chip so that the ISA slots are always available, without needing to have a bridgeboard of any sort.



What, in your opinion, are the best things about having active ISA slots?

Simple. Low cost Ethernet and internal modems. Our aim with the BoXeR was to reduce the system cost, therefore BoXeR systems with Ethernet and modems will cost little more than the basic machine.

I hope this will lead to more networked Amigas. Internal modems use the 16C550 buffered serial chip interface, allowing full speed transmission while lowering the processor overhead.

Explain why people are going to need two video slots.

We use a slot to bring the video and audio signals up to the back of the PC case and we changed from having a special slot for this purpose to having 2 video slots.

Two video slots allow a Video Toaster and the video card to be fitted at the same time. As the video slot aligns with a Zorro slot, it will allow a graphics card to be fitted which can also display AGA graphics.

So this machine is going to be suitable for an NTSC market and a PAL one?

Yes. However, there are two different small components between the PAL and NTSC versions. These parts change the AGA chipset clock slightly, but most TVs and virtually all monitors will work happily without this change.

In the past, the composite video circuitry was quite different between PAL and NTSC machines, but on the BoXeR this is just a simple jumper change.

Talk me through the additional feature slot on the board for MPEG or a genlock, and tell me why it couldn't be on the video slot.

The production boards will have two video slots rather than one video slot and one AV slot. We are therefore assigning one video slot to our video out board. If a video (Picasso) card is fitted then it will replace our video out board and, in the case of the Picasso, it connects to both the Zorro and video slot to allow VGA and video images to be displayed on the screen.

On the basic machine we have a card which plugs into one of the video slots and provides RGB video, composite video and audio outputs – its main purpose is to bring the connectors up to the back of the case.

We are planning a future version of this card which, in addition, has a flicker fixer integrated. We have already completed the design of a further enhancement with combined genlock, MPEG 1 and flicker fixer. This board will fit into both the video slot and the Zorro slot behind it.

The Zorro is required to provide the MPEG data to the board. One of the impressive features is that this will allow live video to be genlocked to the Amiga and then output through the flicker fixer onto a VGA monitor.

Get on board

Although the BoXeR motherboard is a baby AT-style mainboard, there's enough room on it for all these things:

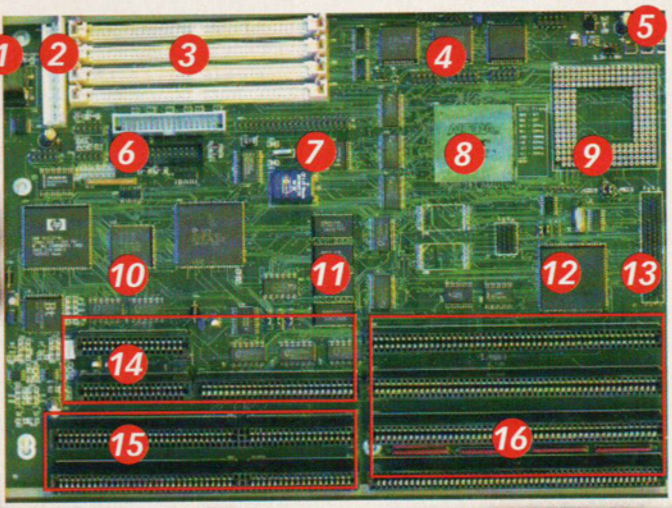
1. Keyboard connector. This is auto-sensing so it will work with both Amiga and PC keyboards and has no sense problem with PC keyboards (no modifiers will cause the rest of the keyboard to become dead).

2. Power connector. This is where the BoXeR will get its power from the PSU in the tower case. It's a completely standard PC-style power connector so there's no need for any modification to the PSU.

3. Four 72-pin SIMM sockets. These will theoretically take a maximum of 2Gb of RAM. Of course, you have to wait for those SIMMs to be designed and why would you need to have that much RAM anyway?

4. CIAs. These little beauts keep our shores safe against insurgency... no, wait a minute, they're in charge of looking after the ports and various other bits.

5. Voltage adjustors. This little lot makes sure that the main processor is getting just the right voltage – 5v for the '040 and 3.3v for the '060.



6. Ports Galore! These give you mouse, joystick, serial, parallel, floppy and UDMA IDE (there will actually be two of these on the finished board).

7. Real-time clock. Here's a clock to make sure that your Amiga is ticking over just fine.

8. Altera Flex programmable logic chip. This silver beauty is a mere .8mm thick but has 356 connections on its underside for its 50,000 transistors. It uses the 2Mb flash RAM (just down and to the left) to store things like Kickstart and a CD-ROM filesystem that can be booted from.

9. The processor socket. This socket will hold your 68040 or 68060. The chart to the left of it shows the speed of the processor, from 25MHz to 75MHz.

10. It's your PAL! This is the PAL, or Paula, Alice and Lisa. They are the AGA chipset and, as such, they have a big place on the BoXeR motherboard.

11. Chip RAM. This is your 2Mb Chip RAM. In future BoXeR designs there might be no chip RAM at all.

12. Buster. This is what allows you to use the Zorro slots and has been modified to allow for active ISA slots.

13. Processor slot. This is the slot of the planned co-operative effort between phase 5 and Blittersoft, to give the BoXeR a PPC. Because the motherboard has none of the limitations of the A4000 motherboard, all that will be required is the PPC – no local RAM or SCSI will be needed, making the PPC a lot cheaper for this board.

14. Two video slots. One of these will hold the standard video out that the BoXeR will come with, with a second possibly for a video toaster or other output that requires a video slot.

15. Two active ISA slots. These will allow you to to fit very cheap ISA network, modem or serial cards to the inside of your Amiga.

16. Four Zorro III slots. Four Zorro III slots await your pleasure. In the final design, this might be upped to five in order to allow for at least one Zorro III slot that will be independent from the video and ISA slots.

Have you any plans for a future BoXeR that you can't put in this one?

We have fixed the feature set of the BoXeR so that we have a stable specification which can be delivered. Future enhancements will be in the form of software upgrades and some of these will include additional logic for improving the performance.

One feature which will not be in the first shipping units is the chunky to planar hardware that was in the CD^{32} Akiko. We are planning to add this at a later stage as a free upgrade, which is one of the benefits of programmable hardware!

There are other performance enhancements which we are looking at, to boost the performance of applications, particularly graphics programs, and we have started discussing the best features to add with other developers.

The BoXeR will have a range of enhancements in the future. We have planned major revisions for each year, with logic and software updates as soon as they become available. The specification for the next version, due for release in late 1999, is already being drafted...

PRICING

The price of the BoXeR doesn't seem so bad when you compare it to upgrading your A1200, although it might be expensive for first-time buyers. Putting your A1200 into a tower case with a Zorro III busboard will cost you in the region of £500 and it means you also have to buy a 4000-type accelerator card in order to be able to use the Zorro III properly. Even then, the Zorro III on a busboard isn't going to be as fast as that on a 4000, or on the BoXeR, so the cost of a BoXeR motherboard is comparable to that of upgrading an A1200 to Zorro III.

In addition to the benefits from faster Zorro III and active ISA slots, you also have the security that the system is designed to be that way, instead of being a cluster of add-ons for a motherboard that was never designed to take them. As such, the initial £500 for a BoXeR motherboard is very reasonable. When you add the benefits of buying a complete system from the vendor, I have no problem recommending the BoXeR as the best possible Amiga that anyone could have, and, unlike the almost mythical A\Box, it will be ready this year. I've ordered one already – how about you?

So the BoXeR is almost upon us. If you've looked at the specification or motherboard boxouts then you'll have some idea of how it's all going to come together, but what about the cost of the board? A lot of people have expressed their concern to *Amiga Format* about just how expensive it is going to be, and how much of their existing kit they'll be able to transplant into it. Well, as always there's good news and bad.

For a start, the BoXeR is a far more complex piece of kit than even your A1200 with a Micronik Zorro III busboard attached. Not only that, but it's also far more powerful. Although the Zorro III busboards do open up a whole new world to the A1200 owner, they aren't as fast as their native counterparts in the A3000 or A4000, let alone the superfast version in the BoXeR.

If you have a Blizzard (or CyberStorm) '060 then it's going to be worth your while hanging onto your processor since, as I write this, Motorola are being particularly slow to supply these chips to the Amiga manufacturers. This may have something to do with the new 75MHz version that's imminent, but it's more likely that they need the fabrication plant for something that sells in higher volume. Either way, it might be worth hanging onto that '060.

Your hard drive should simply slot in as a replacement, although you might find it harder to cradle a 2.5" device. Your CD-ROM drive can happily sit in the BoXeR as will any memory you have.

The Boxer shares the happy trait of the CyberStorm MkII in that it can cope with any combination of 72-pin SIMMs, although, like the CyberStormPPC, it will require matched pairs for PPC use (and will probably also go faster under an '060 in these conditions).

The BoXeR will come with a full speed, high density floppy drive, so you're not likely to need your old external floppy drive. Since it will also have two IDE ports, you might be better off getting an internal IDE Zip drive.

The built-in scandoubler planned for the video output will mean that although you can stick to your telly or 1084-type monitor, you may want to upgrade to a multiscan monitor so you can use the higher resolutions available to you without flicker. You can even start adding to your collection of hardware with faster serial ports or an internal modem card thanks to the active ISA slots.

Best of all, putting your Amiga on a network with other Amigas or other machines will be an attractive prospect, thanks to the ultra cheap networking cards you can use in the ISA slots.

Java

Is it your cup of tea?



Part 1

It's the software development that's sweeping over the net. **John Kennedy** assesses what it means for you.

First and foremost, Java is a programming language. It is designed for writing applications and, as such, it has a lot in common with other programming languages.

However, there are several very important differences which set Java apart from other development systems.

Firstly, Java is designed to be platform independent. By that, I don't mean it is portable like C is supposed to be. When Sun Microsystems created Java, they foresaw a time when any program could run on any hardware.

Java programs don't need to be recompiled or tweaked to fit new systems. The same Java program will run on an Intel-based PC, or a Motorola-based Apple or Amiga. Java programs work by running on a "virtual machine". Any computer with a version of this virtual machine can run Java software.

Secondly, Java is a very powerful language. It's not a scripting language like Perl or ARexx. It's not merely some functions which can process strings or file names. Java is a very serious, very high-level programming language.

It's probably one of the most advanced languages around today, with features such as object orientation, multithreading and garbage collection built-in as standard.

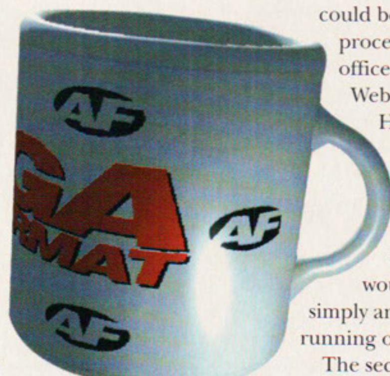
However, Java certainly isn't going to be setting any speed records. It isn't going to be your language of choice for writing *Quake* clones.

Currently, Java programs are more concerned with data processing than 3D texture rendering. That's not to say that won't and isn't happening, but it's always best to clear these matters up right at the start.

> "Java is a very serious, very high-level programming language. It's probably one of the most advanced languages…"

Java and the Java Logo are registered trademarks of Sun Microsystems.

Java is actually designed to be an interpreted language, which is one reason why hand-coded C or assembler will always be faster.



Having said that, as the majority of the work is performed by libraries of native code, it's not going to be too slow either – applications written in Java shouldn't crawl along like continental drift.

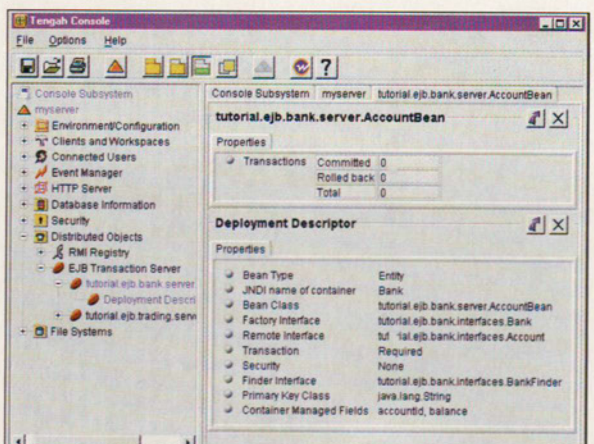
JAVA AND THE INTERNET

Most of the time, you would have a hard job separating "Java" and "Internet". The two words always seem to come together. However, it is important to realise than Java and the Internet are entirely separate – it is possible to have one without the other.

Of course, as you might expect, when you combine the two you get something which is greater than both of them. But first things first.

Java programs can exist in two ways. First of all, they can exist as stand-alone applications. Without a hint of any Internet activity, a computer can run a Java program as though it was a program written in C or C++. The Java program could be a game, a word processor, an entire suite of office applications – even a Web Browser such as HotJava developed by Sun. You wouldn't even necessarily know that the program was written in Java, because it would just appear as simply another program running on your system.

The second way in which Java programs can exist is as "Applets". A Java Applet is written in exactly the same way as any other Java program. However,



Java development software is extensively available for other platforms, but not yet for the Amiga.

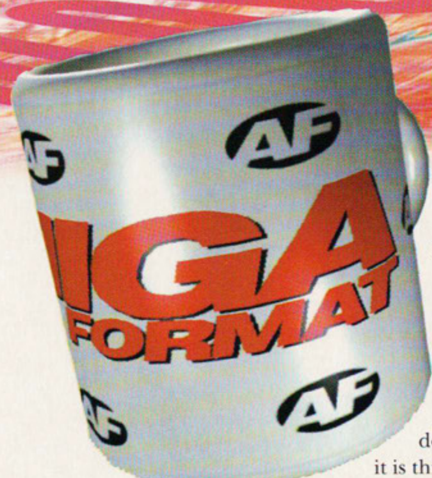
HOW DOES A JAVA PROGRAM RUN?

A Java program starts out as source code, like every other computer program. The source code is created by a programmer, who sits at a terminal thinking great thoughts while imbibing the caffeine-enriched drink of his or her choice. When the Java program is finished, it is compiled by a Java Compiler. This converts the source code into a special binary code.

The binary code can be distributed to other computer systems in the usual ways or embedded inside a Web page in a similar way to a graphical image. Once the Java binary code has reached the remote system it can be executed. In order to execute the program, the remote system starts up its Java Virtual Machine. The Virtual Machine then loads the binary code and interprets it line by line. The program is then executed.

Using a Virtual Machine might seem to be suicide from the performance point of view, but it does offer some huge advantages both in terms of security and cross-platform support. Remember that the single Java binary code program can run on any platform with a Java Virtual Machine, including Unix, Windows, Apple Mac or even Amiga. There is even a handheld computer system which runs nothing else but Java.





the Applet is actually embedded inside a piece of HTML – in other words, a good old World Wide Web page. When a compatible browser loads the page, it also loads all the relevant bits and pieces which it links to – mostly image files, but also the Java program.

The Java program becomes part of the Web browser's page, opening up its display in the middle of the other HTML-generated pieces of text.

This means that the Java application appears to be merely another part of the Web page (although it's a relatively simple matter to make a Java Applet open up a new window of its own, if this is required).

However, because Java programs can be smart, this means that the Web pages can suddenly be smart too. While tricks such as animated GIF images, click-maps and all-singing, all-dancing Dynamic HTML can make a Web page look more active, a Java Applet turns the Web page into a program.

As an example, instead of merely providing an image of a graph, the Java Applet can draw the graph itself onto the Web page. More than that, it can provide buttons for the user to click so they can view the graph from various angles or on a different scale.

Web designers will know that this is still possible using traditional non-Java technologies. However, the big difference is that Java has shifted the processing side from the remote server storing the Web pages to the user's own computer system.

If you wanted to redraw the graph using non-Java techniques, the user would click a button, the browser would send a message to the server, the server would load up another picture and send it back. The server would probably need a CGI script running and it would definitely take time as the entire graph image has be to re-transmitted, and if a thousand other users wanted to see the image then a thousand new pictures would have to be sent over the Internet. Is it any wonder the Internet can seem so slow at times?

Now let's look at the same problem under Java. When the user downloads the Web page containing the graph, they don't download the graph picture. Instead of a GIF or JPG file, a small Java Applet is downloaded and it is this Applet which draws the graph. To the user, it will look much the same. The difference is that when the user wants a new view, the Applet springs into life and re-draws the graph itself.

No communication with the server system is required and so it works much more quickly. A thousand people could request that the graph is redrawn in a thousand different ways, and still nothing new is sent over the Internet.

JAVA IS SAFE

As you know, virus programs are still a real problem. Sad and malicious programmers still enjoy writing programs which are designed only to wreak havoc, so providing them with a platform-independent language designed to be spread over the Internet sounds like a recipe for disaster.

However, this isn't an issue with Java. Java is safe because a Java program doesn't run directly on your computer system. Instead, Java requires a "virtual machine" and it runs on this.

> "The Java Virtual Machine is like a software emulation or simulation of another piece of hardware."

The Java Virtual Machine is like a software emulation or simulation of another piece of hardware. If something happens to go drastically wrong, the very worst that can happen is that the virtual machine goes wonky – not the computer system on which the Java program is running.

Java tries hard to be as stable as possible and so it's not possible for the programmer to directly peek and poke into memory. Nor is it possible to read or write to elements outside those defined for an array. As a result, there is no possibility of writing to memory which you shouldn't, which could bring the entire system down.

Java removes the differences between computer platforms by using the Java Virtual Machine as a hardware abstraction layer, sitting between the Java program and the hardware which it is running on.

A window opened by a Java program on a Windows95 system will look like a standard Windows95 window, with the same fonts and little zoom and close buttons. But exactly the same Java program running on an Amiga which has a Java Virtual Machine will also open a window, but the window will look and behave like an ordinary Amiga window.

The Java program will say "open a window this big" and it's up to the Virtual Machine for each platform to do it. It's this Virtual Machine which is the hard part, as it must be written for each hardware platform. It's the Virtual Machine for the Amiga which we need in order to use Java programs.

JAVA AT WORK

This makes Java perfect for adding a degree of intelligence to Web pages and making them stand on their own two feet. Instead of a Web page blindly sending back all the information a user enters to the over-worked server, a Java Applet can process it first and send back only what is needed.

Processing credit card numbers, creating 3D representations, sorting out questionnaires, managing on-line games – by shifting the burden of processing to the host system rather than the server, not only is the Internet demand reduced, but the response-time is quicker and, simply, more is possible.

This approach also makes Web browser development a great deal simpler. Let's say you have developed a new format for sending moving video over the Internet. Although your format is great, it's a terrible nuisance to have to rewrite all the current Web

Continued overleaf ➡



browsers and then convince people to download them before you can use your own video.

Instead, you only need to write a Java Applet which can view the video. This means that everyone can use their current (Java enabled, that is) browser.

Better still, unlike using "plug-in" modules for Web Browsers, you only have to write the Applet once, and anyone, no matter what system they are using, gets access to your video.

> Being able to write software for a dozen different machines simultaneously isn't something to be sniffed at.

When I say the "same Java program" I mean exactly the same program. The same binary data – there is no PC version of Java, nor an Apple Mac or Amiga version. Once any system can run a Java Virtual Machine, it can run any software written in Java.

This means that if Corel produce their entire office suite of programs written in Java, it will run on the Amiga as well as on the PC. Can you now start to see why having Java on the Amiga is such an important event?

JAVA ISN'T C

Java is sometimes compared to the C programming language because they seem to share similar grammar and syntax. It's true that Java owes much to C, but it's considerably closer to C++.

C++ provides Classes, and these package up data and method into one unit. In other words, Classes contain all the information structures, arrays and so on, and the functions which act on them. C++ still offers the low-level features of C and it's mostly these which have been removed from Java.

In fact, Java demands a completely new way of approaching a programming problem. Instead of focussing on designing the right function to achieve something, the Java programmer has to define Classes from the outset. This "Objects or nothing" style of programming does tend to make simple programs rather clumsy-looking, but it certainly makes larger programs easier to write and maintain.

If you only need a quick-and-dirty task doing from inside a Web page, the much cut-down HTML hybrid JavaScript might be more useful.

Java also looks after many of the more advanced programming facilities of C++, again in order to reduce potential problems. For example, in C and C++, it's possible to reserve a chunk of system memory in order to fill it with data. Before the program ends, this memory must be returned to the system. If not, the memory is lost until the computer is reset.

This form of "memory leak" is a real problem and can result in computers crashing after an application has been used a few times.

With Java, any memory you reserve is automatically returned to the system. Java has a "garbage collection" system which works in the background and actively seeks out memory which has been reserved but not used for a while. Java hands this memory back to the system and the result is that there are no memory leaks.

Computers like the Amiga are also excellent at doing many things at once, due to multitasking. A single program can launch many "threads". For example, in a word processor you can continue to edit your text even though the system is printing another document in the background.

Writing programs which do this in C or C++ isn't particularly easy. It's hard work to code all the necessary systems for looking after data which is shared, stopping and starting threads and managing memory. Java looks after all of this for you and a Java program is able to handle these threads almost automatically. With modern Graphical User Interfaces, this kind of approach is very welcome indeed.

This approach to programming can worry a lot of people. Programmers, especially C and C++ programmers, are used to twiddling with bits and allocating memory as they see fit. Having to say goodbye to these features can be hard. Having to make the move from programming at a near-hardware level where speed is critical to a more abstract object orientated approach isn't easy.

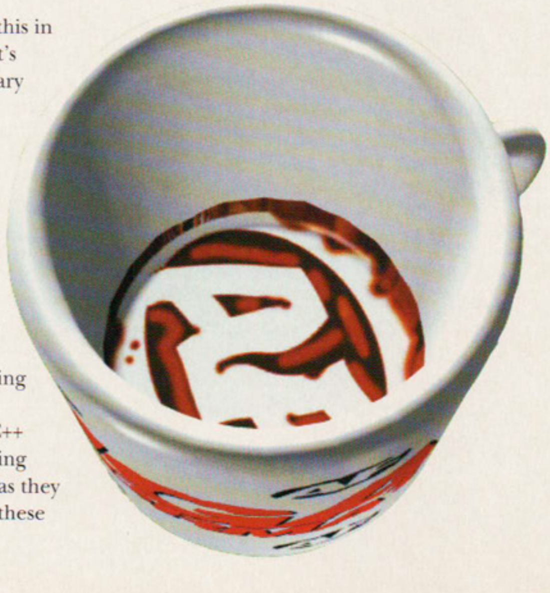
Yes, there are tradeoffs. However, Java has some fantastic possibilities. Being able to write software for a dozen different machines simultaneously isn't to be sniffed at. Neither are the features offered by the standard Java objects which all Java programs are based on.

Java programs can rely on comprehensive support for everything from graphics to networking, which means no more having to reinvent the wheel every time you want to start a new program. It also keeps the size of Java programs down.

This is because programs use the Java objects already present on the system running the program so the Java binary code can be quite small. No-one wants to download 10Mb Applets over a modem link, and with Java you shouldn't have to.

JAVA IN THE FUTURE?

Java offers the Amiga a very real way to get back into late 1990's computing and it's importance shouldn't be underestimated. Java is so much more than a way of tarting up Web pages. It's a new concept in programming languages, and one which could be the future of the Amiga.



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F1 Grand Prix

Oliver Roberts with top tips to get you on the right track.

ON THIS MONTH'S CD

AFCD27:-CoverDisks-/F1GP

During 1991, Geoff Crammond was busy slaving away on his latest masterpiece. Little did he know that he was in the process of creating a classic game (erm… simulation). Then, in February 1992, the day came – *MicroProse Formula One Grand Prix* was unleashed on the Amiga.

Formula One Grand Prix, which is commonly abbreviated to *F1GP*, is a complete simulation of F1 motor racing, based on the 1991 season, accurately recreating the action, dramas and decisions in real *F1*. Yes, I did say 1991!

You'll be right in surmising that this means the game is out of date, but this predicament has been more than adequately addressed. In early 1994, after seeing add-ons for the PC version of *F1GP*, I took the plunge and decided to make an editor for the Amiga version. Little did I know that Steve Smith was also working on *F1Ed* for the Amiga too.

I wanted to be able to race with the cars coloured as they were in the 1994 season, instead of having to pretend.

Please note that *F1GP* is not available to residents of South Africa, Canada, Japan and the USA.

Also, once I'd mastered beating the computer drivers on the highest difficulty level, the challenge disappeared and I got bored with the game, so my other aim was to make the computer cars faster, allowing them to be more competitive.

After *F1GP-Ed* was released, other useful utilities started to appear which enhanced the game further. Internet-based *F1GP* competitions started to appear in 1993 which provided an exciting new challenge, allowing people to compete against each other instead of the computer. But why did all this happen?

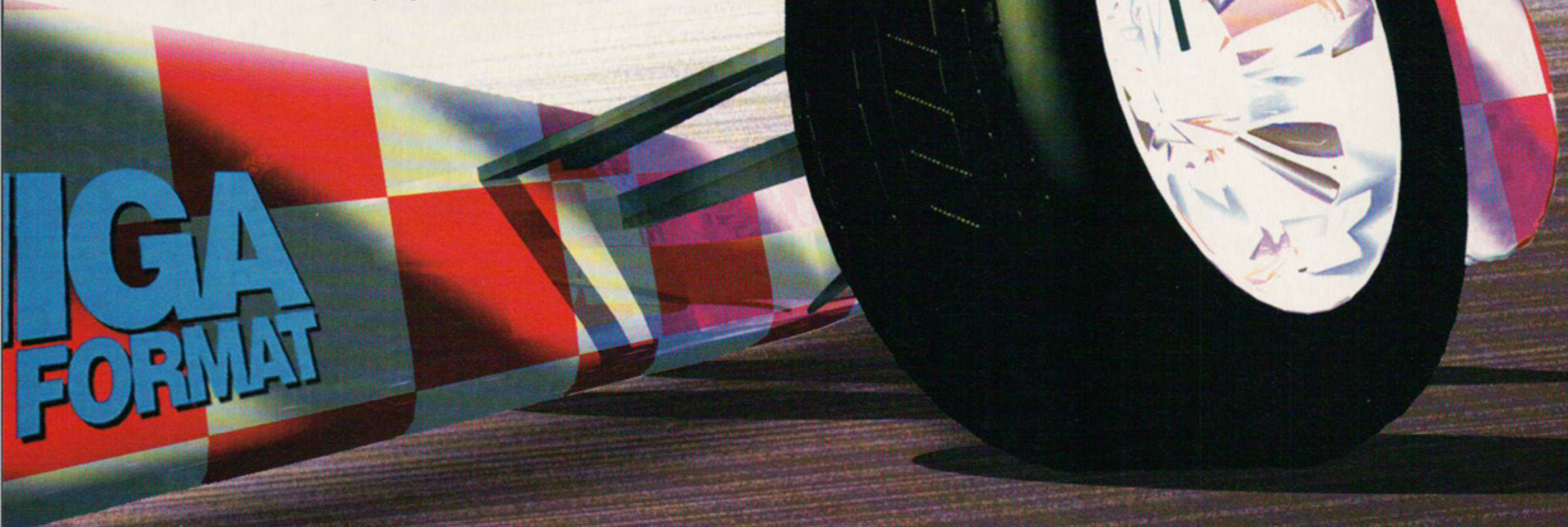
It has to be due to *F1GP*'s realism and the elements which keep you coming back for more, year after year. You always want to go faster and faster, and as long as you know that somebody has set a faster time, you'll keep on wanting to go faster. If you think about it, this feeling is shared with real F1 drivers and this is why I think *F1GP* is still so popular today.

GETTING STARTED

Once *F1GP* is up and running, the first thing you will see is the password protection screen. After entering the correct word (see page 97), you will be in *F1GP*'s menu system. This is incredibly simple to use – just point and click. Once you enter the cockpit, just press the Esc key to return to the menu system.

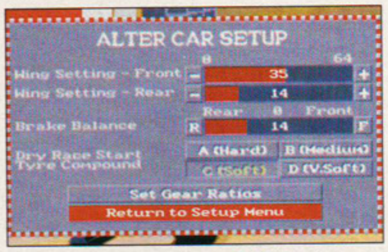


This is what you'll see first – the main menu. All the game options are accessible from here.





***F1GP* has a range of options and difficulty levels to suit everybody.**



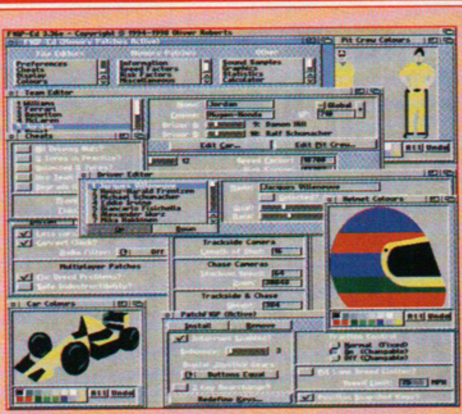
Once you've got the hang of driving the car, try tinkering with the car setup.

F1GP-ED – BRING F1GP UP TO DATE

***F1GP-Ed* is an editor and enhancer for *F1GP*. What does it do? Well, first and foremost, say goodbye to trundling along with the slow computer cars in the 1991 season. Most visual aspects of the game can be customised, including the car, team and crash helmet colours. The cockpit design used in the game can also be customised, and *F1GP-Ed* is supplied with some good replacements if you don't feel up to designing your own. Also, the sound samples used by the game can be replaced.**

***F1GP-Ed* has developed into a huge program with hundreds of switches and options that allow you to adjust *F1GP* to your needs. Just about all the options that usually have to be manually loaded in *F1GP* every time you start it up can be preset using *F1GP-Ed*.**

One of the most impressive features is the ability to increase the frame rate. The game normally runs at 8 frames per second, but with *F1GP-Ed* it is possible to bump this up to 20 frames per second if your Amiga is fast enough.



This results in a much smoother screen update, and these features are only the tip of the iceberg. I recommend that you give *F1GP-Ed* a try to see just what's on offer. Once you've tried it, I'm sure you won't be able to play without *it*!



Bog-standard *F1GP*.



'98 *F1GP* enhanced with *F1GP-Ed*.

DRIVING GUIDE FOR BEGINNERS

Newcomers should leave the game in Rookie mode to begin with, leaving all the driving aids on. That way the computer cars will be at their slowest and, more importantly, the computer will brake for you, automatically change gears and your car will be indestructible. All you really need to do is steer the car to keep it on the track! This is the ideal way to get a feel for the car and to learn the layout of the circuits.

So you want to do some driving now, right? For this guide we'll use the Monza circuit (Italy) as this has a lot of fast straights with a range of different corners and chicanes.

From the main menu, select 'Practise any circuit' and choose Italy. Once you've gone through the menus you'll find yourself in the pit lane. Below the RPM meter you will see a row of six symbols. These are the driving aid indicators and can be toggled on and off using the F1, F2, F3, F4, F5 and F6 keys. If you push the joystick backwards while in the pit lane you will be able to access the car setup menu, but for now just press the fire button to start your car up and leave the pit lane.



Press forwards on the joystick to accelerate and you will drive out of the pit lane, which is marked by a yellow line. Once actually on the circuit, you will see a white dotted line. This can be switched on and off by pressing the F5 key. This is usually the ideal driving line so make sure you follow it to achieve the fastest lap time. You don't have to stay on the line but it does show you the quickest route through chicanes and along corners.

After leaving the pit lane, keep accelerating and you will reach a double chicane. The computer will automatically slow your car down for corners because you have the 'Auto Brakes' driving aid switched on. Note that you do not need to disengage the accelerator. Steer your way through the chicane and continue around the track.

You will see countdown markers before some corners on the track and these tell you how many metres to go until the bend. They will be very important once you start braking for yourself without the driving aid.

When you see the yellow dotted

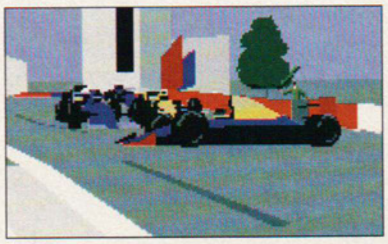
Continued overleaf ➡



Proof that *F1GP* is still realistic, with a little help from *F1GP-Ed*. The all too familiar formation of the '98 McLarens.



The camera views can be adjusted using *F1GP-Ed*.



A spin at Monaco can easily lead to big jams and pile-ups!

HALL OF FAME

The Amiga *F1GP* Hall of Fame is a competition concerning 100% pure speed over a single lap. Members submit their fastest lap time for each of the 16 circuits and points are scored accordingly. Basically, the faster the lap time is, the more points it is worth. Members are ranked according to their total points achieved. Anyone with an email or netmail address can take part, competing against other members.

The Hall of Fame is primarily distributed as an AmigaGuide document, although there is also an HTML version online. Newcomers are forgiven for looking at the top lap times and concluding that the people who set those times must be cheating. It's not until you see the times in the Hall of Fame that you realise how much faster you can go.

For some people it may take time to reach the top, while others find it easy to jump straight in with superb times. For lap times to qualify for inclusion in the Hall of Fame, they must have been set conforming to the rules. Summing them up, the rules essentially say that you must not cheat (e.g. by cutting corners or using any of the cheats in *F1GP-Ed*).

To back this up, most members record their laps using *AGPPerf*, which provides the proof if anybody should require it. If you want to improve your lap times then this is the ideal competition to look at. As your times improve, you have the satisfaction of knowing that you are beating real people. Maybe you are one of the privileged few who have what it takes to reach the top of the Hall of Fame?



INTERNET CHAMPIONSHIP

The Internet Amiga *F1GP* Championship (that's the IAF1GPC, or simply the IC for short), is similar in principle to the Hall of Fame. However, this time the challenge is to compete against other drivers over a full season of 16 races. This is very similar to a real-life F1 season, giving you the chance to imagine that you are a real F1 driver.

Although it helps to be a fast driver over a single lap (in Hall of Fame terms), it is not necessary. What is important is consistency as you have to be fast during the whole race for every race to be in with a chance of winning the championship. Pitstop strategy (i.e. how many times you will stop for new tyres and which compounds you will use) is also another aspect that has to be carefully considered.

There are currently two similar championships – the Ace series and the Semi-Pro series. The Ace series consists of 16 qualifying sessions and races, where points are gained from each and count towards the championship standings. Races are run at 100% distance with no driving aids. The Semi-Pro series differs as the races are run at 50% distance, only 10 races count towards the championship and you are allowed to use all the driving aids apart from auto brakes and gears.

Obviously, the Ace series is targeted at die-hard drivers. Those who aren't up to the pace of the Ace series, or don't have time to do 16 full races, can participate in the Semi-Pro series instead. The championship is usually run once a year, spread between October to June. Drivers must submit their results before given deadlines.

There is generally a race every two weeks and the qualifying deadline is one week before that of the race. Drivers send in their race and qualifying times and the results are published on the *F1GP* mailing list a couple of days after the deadline and then appear on the website soon after.



You'll need to visit the pits during a race to get some new rubber or to fix any damage.



The pit lane can get busy during races so make sure you check your mirrors before leaving your pit!

line you will know that you are approaching the pit lane and the end of the lap. To enter the pit lane you need to press the 'Enter' key beforehand (the yellow pit indicator will light up on the dashboard). Steer into the pit lane and the computer will guide you into your pit bay when you reach it. To exit the cockpit, press the 'Esc' key and the menu screen will appear. Now try some other circuits and, when you're ready, try a race against the computer cars.

THE NEXT STEP

Okay, so you've mastered some of the circuits using the driving aids. Now it's time to get into some serious racing…

First up, you need to learn how to drive without Auto Brakes, so disengage that driving aid by pressing the F1 key. You will soon realise that braking for the corners is not as easy as it sounds. Don't worry if you keep spinning off or crashing as learning when to brake takes time. Also, the Auto Brakes decrease the acceleration on fast corners so you'll stay within the limits.

Without Auto Brakes, it's easy to go round corners too fast, resulting in some cross-country racing.

PERFBASE

The PerfBase is a collection of the fastest perf files saved with *AGPPerf*. It can be found on the Amiga F1GP/WC Support Site. If you need some perfs to compare with your own then this is the ideal place to look for them. The perf files here show you exactly how the top drivers accomplished their fastest laps.

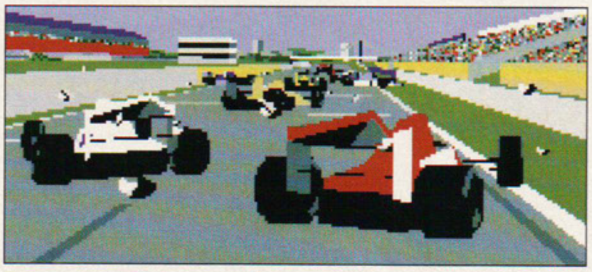
This is probably the most important aspect of *F1GP* to get right – to get good lap times, you must brake at the right time so that you slow down enough to make the corner. At the same time you must not brake too much or too early otherwise you will lose time.

A top tip is to use objects in the scenery to mentally mark your braking points. Most corners have 100 and 200 metre marker boards which are extremely useful for this purpose. After a while, you will be able to drive much faster (the Auto Brakes actually slow you down far more than necessary).

> *Once you've mastered braking and changing gear, the other driving aids should be a lot easier to overcome.*



Look out for marshals waving yellow flags – it means slow down because there's danger ahead.



Watch out for blind corners. If you come across carnage like this then you're going to be in big trouble if you can't slow down in time to avoid the wrecks!

Next, enable manual gears by pressing the F2 key. Manual gears are, perhaps, not so difficult to get used to as the braking technique. Change up a gear by pressing the gear change button while accelerating. To change down, release the accelerator (or brake) and press the button. Manual gears are actually very useful as they give you a way of knowing how fast to take a corner. For example, once you know that you can get around a corner in a certain gear, you just need to remember the gear number and then you have a rough idea of how fast to take that corner the next time. Again, you will need a very good memory.

Turn on the suggested gear driving aid (toggle on/off with F6). This will display which gear you need to be in for the next corner. Needless to say, this is very useful, but be warned that it is not always right! Once you've mastered braking and changing gear, the other driving aids should be a lot easier to overcome. Eventually, you won't need the suggested gear indicator and you will have probably memorised the ideal racing line already. Then you can start worrying about car setups.

ADVANCED DRIVING TIPS

Practise makes perfect. Yes, you've probably heard that saying hundreds of times already, but it couldn't be more appropriate when applied to *F1GP*.

When I first started playing, I didn't know any of the circuits – now I've driven around each one so many times I know them off by heart. The layout of every one is so clear in my mind that I could draw them from memory!

I've memorised what gear I need to be in for bends and chicanes, and my own personal braking points are very clear in my mind. I'm not boasting – if you play *F1GP* anywhere near as much as me, you will be the same. Yes, maybe it's a bit sad, but at least it's fun.

To obtain good times you will need to be familiar with setting the car up. It is critical that you use the right setup for each circuit as full distance races require a slightly different setup to accommodate for the fuel load at the start of the race. In general, the car will

IN-GAME KEYBOARD CONTROLS

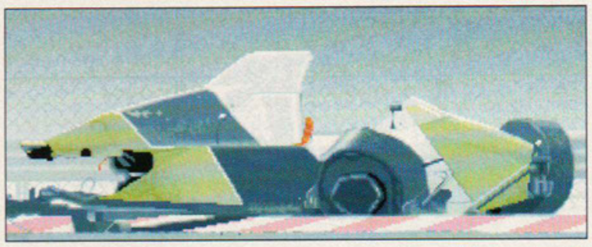


F1 Auto brakes F2 Auto gears F3 Self-correcting spin F4 Indestructible F5 Ideal line F6 Suggested gear

MISCELLANEOUS KEYS
Esc – Exit cockpit and return to menu.
Q – Return to pits (qualifying and practice).
ENTER – Signal to pits.
K – Keyboard/Joystick toggle (joystick default).
ALT+D – Detail adjust (3 levels).
N – Show name of driver.
R – Action replay.
+/- – Switch sound on/off.

VIEWS
LEFT ARROW KEY – Trackside camera.
RIGHT ARROW KEY – In-car cockpit view.
UP ARROW KEY – View next car ahead.
DOWN ARROW KEY – View the car behind.
'HOME' – Return to your car.
'HELP' – Chase view.
'DEL' – Reverse chase view.
'INSERT' – Other action replay mode.

CAR CONTROL
A – Accelerate.
Z – Brake.
< – Steer left.
> – Steer right.
A + SPACEBAR – Change up a gear.
SPACEBAR – Change down a gear.



Yes, this is (was) an F1 car. Clearly you need some more practise if your car ends up looking like this.

oversteer more easily with a full fuel load and braking distances will be increased. To compensate for that, it is usually sufficient to simply add some rear wing, which in turn means that the gear ratios may need to be optimised.

A good source of car setups is the Hall of Fame and the datafiles supplied with *F1GP-Ed*. Car setups have developed a lot over the years and it can be concluded that high downforce setups are the way to go – most circuits require full front wing downforce.

Another characteristic of today's setups is oversteer. The preferred brake balance has gradually shifted to the rear, again resulting in possible oversteer under braking, which is exactly as intended as it allows a better turn in on corners, resulting in a faster entry and exit speed. This kind of setup may take some getting used to.

I could write pages and pages about car setups and how to get the best out of the car, but there simply isn't the space. Instead, I wish to introduce a couple of programs called *SplitTime* and *AGPPerf*. These alone are invaluable aids to help you drive faster.

SPLIT TIME

If you watch F1 qualifiers on TV then you may have heard about split times.

Basically, the track is split into four sectors (opposed to three sectors which TV coverage now uses). Instead of *F1GP* only displaying a time when you complete a lap, it will now show you the time at the end of each sector too.

This gives you a better indication of how good your current lap is going to be, without having to finish the lap to find out if you are off the pace.

Normally, you will tend to set your own physical markers at various points at which you look at the time to see how fast you are. With *SplitTime*, the split times can be saved and it also calculates a 'virtual best time', which is the time you would have got if you had driven your best times for every sector in a single lap.



AGPPERF

AGPPerf records telemetry data as you go around the track, giving you an accurate breakdown of how you drove the lap. All real F1 teams use this and you often see drivers looking at a graph on a piece of paper. This is the telemetry data. When compared with their teammate's graph, the driver can see where he's gaining or losing time.

AGPPerf gathers setup details, horse power and more important variables like speed, revs, gears, car position on the track and car control input (acceleration, braking and steering). The data can be saved to a perf file.

With *GPDisplay* you can load up to four perf files simultaneously which allows direct comparisons to be made. For example, if you record one of your own laps with *AGPPerf* and compare that with a perf file from the PerfBase, you'll see where you are losing time and, if analysed correctly, you should be able to improve your best lap time. AF

USEFUL F1GP ADDRESSES

AMIGA F1GP/WC SUPPORT SITE – http://www.nanunanu.org/~oliver/AmigaF1.html
Central *F1GP* site which has links to all major *F1GP* sites. All *F1GP* utilities are available here. This is also the home of the *F1GP* mailing list, webring, links page, *PerfBase* and other *F1GP* resources.
THE HELP SECTION – http://online-club.de/members1/rp10930/f1gp/help.html
Detailed and informative track guides provide an excellent way of finding out how to drive faster.
AMIGA F1GP HALL OF FAME – http://homepages.enterprise.net/aws/hof/
INTERNET AMIGA F1GP CHAMPIONSHIP – http://www.nanunanu.org/~oliver/ic/
F1GP-ED – http://www.nanunanu.org/~oliver/F1GP-Ed/



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SCREENPLAY

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One thing is becoming more and more apparent. If you haven't upgraded your basic Amiga then you are missing out. To enjoy the best games – things like Quake – you'll need a CD player, you'll need loads of extra RAM, you'll need an accelerator board and you'll need a graphics card. Yes this costs, but if you want to play the games on something else you're either going to have to spend £2,000 on a PC or make do with poor console conversions.

With an Amiga you can rest assured that your equipment is a worthy investment and that it's not going to be superseded within 10 minutes. And the benefits of this extra cost? Just turn to page 32...

Andy Smith

32 QUAKE

Bigger than *Doom*, better than *Doom* and in full 3D. Here's *Quake*. ON THE AMIGA!





A Fiend. Yesterday. Give him both barrels...



Nobody likes you in *Quake*. Learn to live with that and learn to hate them back – with bigger weapons.

36 PREVIEW

clickBOOM are also developing their own games. We take a look at *C&C* clone, *Napalm*.



Now that's got to hurt. Incendiary action in *Napalm*.

38 READER GAMES

A chance for every *Amiga Format* reader to show what they can do. Do not enter here with any thoughts of high production values...

Nose of the Beholder . . . Dafydd Jones
Like *Eye of the Beholder* perhaps?
Kak . . . . Alex Smyth
But it's not! Clever eh?
Ice Boards . . . . Laurence Shann
Yo. Kicking. Rad. And so on.
Conquest . . . . Pete Halloran
Taking over the world, *Risk*-stylee.

40 LABYRINTH

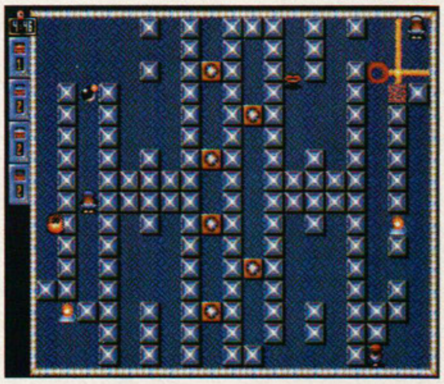
For seasoned adventurers, Alive Mediasoft resurrect a game that's been sadly overlooked.



Never, ever, enter a clown's mouth. You know you'll regret it and things are no different in *Labyrinth*.

41 MEGABLAST

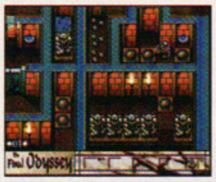
A new *BomberMan* clone arrives and we ask, "Who threw that?" The answer is on page 41.



They may have killed Kenny, but they're not going to kill me. Hot competitive action in *Megablast*.

42 GAMEBUSTERS

We're getting there now – the third level of *Final Odyssey* should prove to be no problem thanks to our excellent walk-through.



You'd be stuck here if you didn't have us to tell you what to do. No, really, you would.



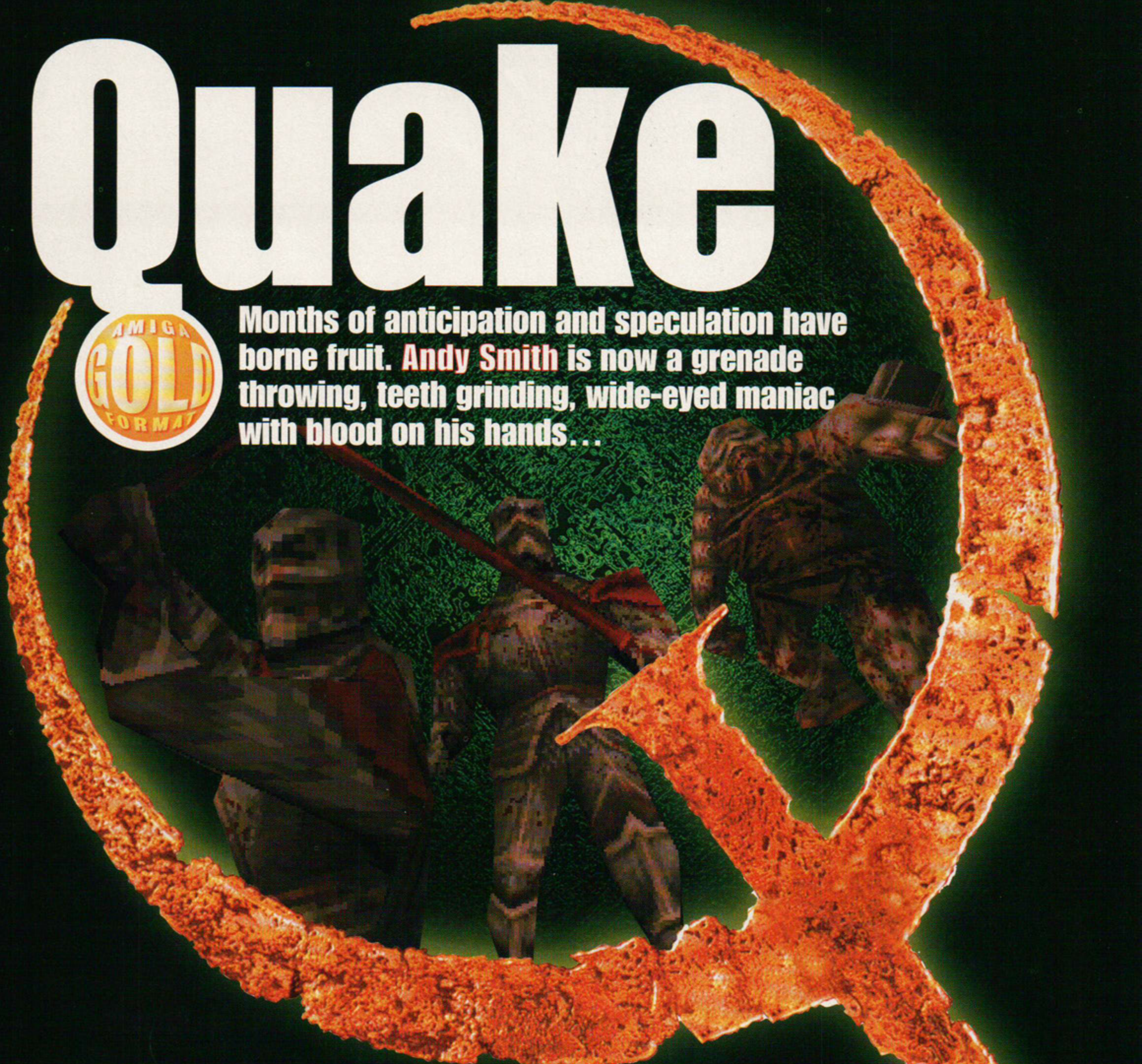
AMIGA FORMAT'S REVIEW POLICY

WHAT OUR REVIEW SCORES MEAN

Every month we scour the world's software houses for the latest and greatest Amiga games. We try to ensure we keep you as up to date as possible and we'll stop at nothing to bring you the best, definitive, no-nonsense reviews of the games that matter.

90+%	The crème de la crème. Only the very best, most playable and original games are awarded an AF Gold – the most highly prized rating there is.
80-89%	These games are very good, but due to minor flaws are not the finest examples of their genre.
70-79%	Good games which are worth buying, especially if you have a special interest in a game type.
60-69%	Average releases with somewhat limited gameplay and appeal. Games in this category tend to be flawed.
50-59%	Below average games which are unlikely to impress your mates or your wallet.
40-49%	Overwhelmingly poor quality games with major flaws and appalling gameplay.
Under 40%	The absolute pits.

Quake



Months of anticipation and speculation have borne fruit. Andy Smith is now a grenade throwing, teeth grinding, wide-eyed maniac with blood on his hands...



Oh boy. All we've ever had are clones on the Amiga – *Testament, Nemac IV* and a handful of the others have been good games in their own rights but it's obvious they're *Doom* clones.

Good *Doom* clones though, because although they looked pretty shoddy in parts (some of the monsters in *Testament* are very 1988), they were great fun to actually play. But for one, and possibly the biggest, genre, the days of making do with clones are over. Make way for *Quake*.

> "... even with some of the game's bigger weapons you're going to be pumping shot after shot into the beasts..."

The heavy metallic clang, clang, clang of a grenade bouncing down some steps before exploding in a shower of light and destructive energy is a marvellous thing and something that's hard to grow weary of. You'll experience this many times in *Quake* as you fight your way through the many levels of the game's three episodes.

The biggest advancement *Quake* has over its predecessors is its 3D-ness. There's none of this pseudo 3D nonsense – this game world is in full, glorious technicolour three dimensions. Balconies above you, walkways around you and dungeons below you all contain solid, gruesome, polygonal baddies – not as many as you'd first imagine, but we'll get to that in a bit – waiting to tear you limb from limb.

Armed with a simple shotgun to start with, the game takes you through progressively harder and larger levels as you try to survive



A familiar sight. Hold down the fire button and just a couple of shots should be enough to see the grunts off as they're not that hard – certainly not as hard as some of the monsters you'll meet later...

Machine of a dream...

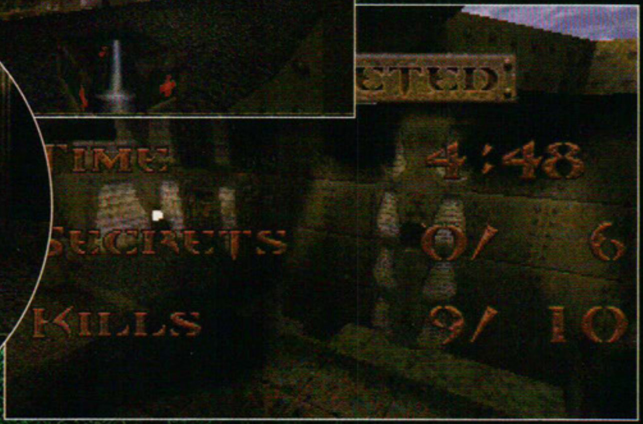
There's no getting away from the fact that you need a high-end machine to run *Quake* satisfactorily. You could try your normal A1200 but the chances are you'll only end up crying tears of frustration. What you need, and this is probably the most important bit, is a decent graphics card. An '060 processor is going to help a great deal too, as is a fair wedge of fast memory.

You can tweak the game around a bit and try to run it in a smaller window to some effect if your machine's not quite up to top of the range standard, but the chances are you're still going to be disappointed at the slower frame rate. If you haven't got an Amiga with go-faster stripes then you really are going to be disappointed, so bear that in mind before ordering your copy.









You may have finished the level and you may have finished it quickly, but that 0/6 secrets score is going to gnaw away at you. You will go back and do it again. And then probably again. And get that last baddie too.

long enough to make it to the level's exit. Along the way you're going to be picking up armour, better weapons and health bonuses. Then running back for the other health bonuses that you couldn't pick up because you were at your maximum.

You're going to be moving cautiously through dark tunnels. You're going to be running full-pelt backwards, firing a nail gun at the chainsaw-wielding ogre that's after you. You're going to be searching underwater pools for secret areas that contain those very useful red armour bonuses. You're going to scared witless at the sound of a dead Samurai suddenly jumping out behind you. In essence, you're going to be having a whale of a time.

Somewhat disappointingly, *Quake* doesn't deviate from the *Doom* plot as much as you'd imagine. This really is all about blood and guts and fighting your way to the exit.

Sure, there are puzzles, of sorts, but these are not exactly difficult because most simply involve pressing a button or a switch here and then trying to find which door/drawbridge/trap has been either opened, lowered or rendered harmless. Clues are even included to help you along – 'The switch for this door is located nearby' is simple enough for even me to comprehend. And you can't exactly miss the coloured keys when you find 'em or know which doors they relate to.

Getting lost in *Quake* is something you'll do often, but you won't ever be lost for long. Simply backtrack for a bit, stop and have a good look round, using the mouse lookabout control, which you'll have configured at the start of the game

Continued overleaf ➡



> "You're going to be running full-pelt backwards, firing a nail gun at the chainsaw-wielding ogre that's after you."





He's got a chainsaw and he's going to use it (whatever happened to Fuzzbox?). These guys are not only hard but they keep lobbing grenades at you – which is why the world goes sideways occasionally.



Nick's Verdict



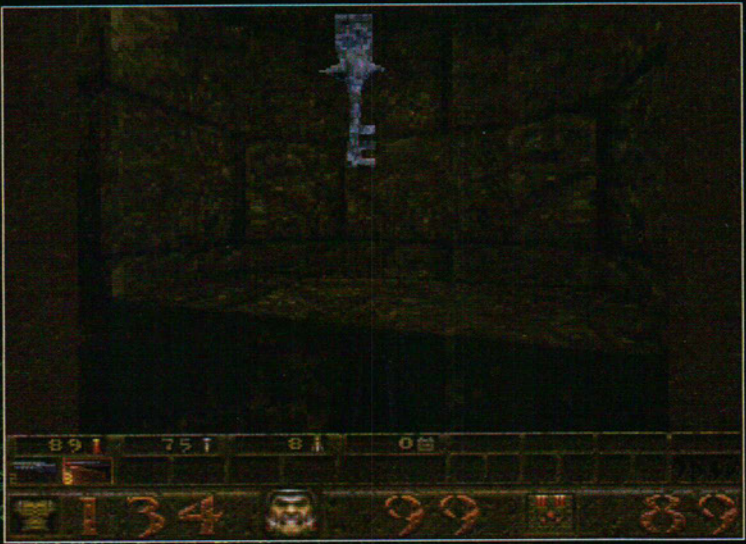
Ha ha. Taste some high speed nails, ogre. Now you spawn of evil will feel the awesome power of my righteous weaponry – die you scum, Die, DIE!

Oh, hello. I was just having a little break from writing there. And what better way to relax than by playing a game. The game of the moment here is, of course, *Quake*.

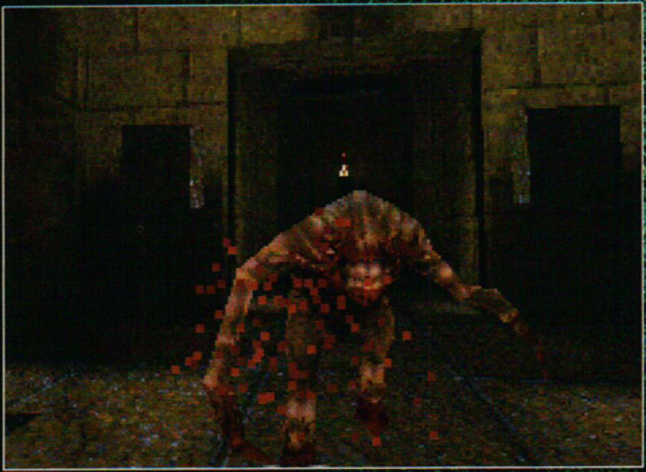
This is a true 3D game, in a true 3D world where you can interact with true 3D characters. And then shoot them. And this Amiga version of *Quake* is actually *Quake*, because it is driven by the same code which id Software developed for the PC.

One of the consequences of this is that, just like on the PC, if you want to play this game properly you will need a fast processor and preferably a graphics card too. If you have anything less than an '040 then it just isn't worth it. I don't think anyone can really complain about that.

I hope that all the people who clamoured for a conversion of this game will now actually go out and buy it, instead of pirating it.



Now there's no mistaking that, is there? Jump up, grab it and go and find the door it relates to. It's not often that you don't know where to go in **Quake**.









A Shambler finally bites the dust. You'll want a grenade launcher whenever you discover one of these.

⇐ along with all the other keys you'd rather use. Then hold down the right mouse button (say) to enter lookabout mode and scan the floors and ceilings for clues you may have missed earlier. Clues you probably missed because that zombie you kept shooting kept bloody well getting up again before a well-aimed grenade reduced it to so many chunks of red, squelching meat.

> **"Clues you probably missed because that zombie you kept shooting kept bloody well getting up again..."**

Exploration is still a big part of the game. Fortunately, there are some great-looking places to explore, with glorious textures everywhere and splashes of colour aplenty, so you're not going to mind just running about looking around.

Look hard enough and you're going to find those consuming little sidelines – the secrets. Finish a level and it'll happily inform you that you discovered 0/6 secrets. The desire now is to go back and do the level all over again, but this time not just making a panic-dash for the exit but spending some time looking around and seeking out that odd-looking piece of wall or that switch on the floor behind the boxes that will lead you to somewhere a little bit special.

Such is the pull of *Quake*. Initial fear and panic give way to curiosity and then even a competitive desire to not be beaten by the level designers, but to laterally think (sometimes, anyway) your way round a level until everything that can be pushed has been pushed and everything that can be pulled has been pulled. And then you'll go and scare yourself all over again as you start the next level and meet some new monsters.



Let's talk about the amount of monsters then. Unlike *Doom*, there are far less of them in *Quake*. Sure, they're much better looking, but they rarely attack in more than threes and fours. Is this a big problem? For me, no.

OK, there was a lot of fun to be had in *Doom* when you could go barrelling into a room full of monsters and just spray the area until nothing continued to move, but hey, that was on the PC.

Now the monsters are just meaner and harder. Meaner because they do have a habit of coming out of the most unlikely places at just the wrong time, causing much fear and involuntary yelps, and chasing you around with a horrid glint in their eyes. Harder because even with some of the game's bigger weapons, you're going to be pumping shot after shot into the beasts before they fall over.

Thankfully, you can save the game at any point. This is a double-edged sword though, because it does mean you get into the habit of killing off a few baddies, saving the game just before you go and explore a new part of the level and then simply running about to see what's around, not really caring if you get killed

Then you just go back and re-load the game before clearing the area out properly. Obviously, the more seasoned gamers are not going



KABOOM! A grenade round the corner is always a good thing to do. Never resist the urge…

to be saving often because it's more risky that way. I saved the game religiously after every scrap. Ahem.

One place no-one's going to criticise you for saving is when you come across one of the end of level bosses. These huge monstrosities are not only mean and tough but they're persistent too and will hound you down, so you'll have to be pretty creative to kill 'em off sometimes.

Be warned. Nothing sounds better than *Quake*. If you're deaf, then sorry and all that but you're going to miss out. Aural clues are a very important part of the game, not merely because the guttural moan of a Shambler behind you is guaranteed to give you the willies, but because when you hear a creaking and clanking door open you know that something's happening. Somewhere.

What it is and just how life-threatening it's going to be remains to be seen but believe you me, you'll want the sound up so you can hear every gunshot, squelch, footfall and bone drop.

Quake is going to take you days to play through, even on Easy.





However, the Normal and Hard settings are where the action really is and where you're going to get more bangs for your bucks.

Sadly, the single most enjoyable part of *Quake* is going to be out of the reach of most gamers – the network option. There are a bunch of special Deathmatch levels that up to 16 networked players can fight each other on, plus all the levels from the main game itself.

Ben's Verdict



Quake is the biggest consumer of time at Future Publishing, apart from making magazines. The staff of all the PC mags spend their whole lunch break and evenings just fighting each other. I know it's supposed to be cathartic, but you'd think they might have a bit more of a life.

However, not only is their skill level a bit of a hindrance to me wanting to play a network game with them – so's my machine. On my standard A4000/'040 with 16Mb of fast RAM and no graphics card (a machine that we all salivated over when it first came out), I get shot by Nick within seconds when we Deathmatch. While I'm not ace at this type of game, the reason is that he can have *Quake* running at almost full screen, but to make mine playable it has to be in a tiny window, so the first I often know about Nick being around is when my screen turns sideways to indicate me having a bit of a lie down, what with metal fatigue and lead poisoning (being shot).

The answer is that if you've got the spec, this is the game for you, especially if you're on the net. If not, now is the time to buy that PPC accelerator and graphics card that you've always wanted…



Even the dogs bite here. Pump some lead into 'em and they stop their yapping, though.

> **"…the single most enjoyable part of Quake is going to be out of the reach of most gamers – the network option."**

If you've got network access then the process is simple: someone becomes the server, decides how many players can join the game and then waits for them to come to him.

Once embarked upon, a network game of *Quake* can be all-consuming. Hours can pass unnoticed as you all run around the levels, blasting and being blasted. Sadly though, most of you are not going to get the chance to enjoy this feature.

Don't let that put you off. *Quake* has enough quality in single player mode to more than warrant a purchase (check out the machine specs box first though).

Fast, frenetic, engaging and engrossing, *Quake* is all of these things and more. It may only be a game, but the whole game world is so realistic that you can't stop your palms from getting sweaty and the hairs on the back of your neck from standing up. *Quake* is gripping, chilling stuff. Hurrah!

PUBLISHER: PXL Computers
PRICE: $45 plus $5 p+p (UK price tba)
VERSIONS: AGA/GFX card
REQUIREMENTS: Fast machine with FPU and CD
RELEASE DATE: Out now

GRAPHICS: ●●●●●
Astounding. The lighting effects are superb and the variety is enormous.

SOUND: ●●●●○
Almost as good as the graphics, and as important. The effects will scare you. Honest.

ADDICTION: ●●●●●
Get started and only the next issue of AF will get you away from the monitor.

PLAYABILITY: ●●●●○
Set the keys and mouse up as you'd like them and then it's so simple to play. Bliss, really.

OVERALL VERDICT:
Get it running as it should and you're in for an unrivalled gaming experience. Excellent.

94%



Just over a minute into The Installation – 14 dead monsters and one dead you. I'll get it this time…

Previews






Andy Smith gets to grips with Napalm, a new C&C clone from Canadian Amiga champions clickBOOM.

Napalm



You've struck oil (cue the Beverly Hillbillies theme tune and jig around the room).

Napalm	£TBA
Release Date:	TBA
company:	clickBOOM
email:	info@clickBOOM.com

As reported in last month's Work In Progress, clickBOOM knew they were going to have to produce a *C&C* clone sometime in the near future. The flood of answers they received to their questionnaires sent out with their previous games, *Capital Punishment* and *Myst*, indicated this was the most popular genre. And though they've already proved they can take a big licence and make it work (read the *Quake* review yet?) they've decided to develop this clone themselves.

clickBOOM have been reported as having talked to Westwood, the *C&C* creators, about a straight port of *C&C* from the PC to the Amiga, only to find Westwood had priced that option out of the equation. So though it's not a direct conversion of *C&C, Napalm* is very definitely from the same school.

It's more advanced than *Dune II*, with a better enemy AI and some of the bugs knocked out (you can't get the baddies to shoot at their own buildings f'rinstance) but there's no denying this is from the same mould.

One of the biggest reasons for a thumbs up for *Napalm* will be the ability to serial/modem/network link some Amigas together for real-time, multi-player action. Though this isn't yet working on the version I've been playing, I've every faith that clickBOOM are fully aware of what they need to do to make this part of the game attractive.

Those of us who are only ever going to be playing solo shouldn't feel too left out, though. The game's going to be mission-based and there's plenty to keep you busy.

Your main resource is oil, so find and drill for this, then go through the usual process of building factories to produce tanks, power stations to keep it all going, turrets to protect your installations and build up your forces before going after the enemy's. Not that it's going to be that simple, because clickBOOM are very keen to stress that the enemy's intelligence is high.

The baddies will be using the same tactics that *Warcraft*ers, *Dune II*ers and *C&C*ers have been using all along – sending in a lone unit now and then to lure you back onto their defences (not that you'll fall for that old trick, eh?) or tank-rushing your woefully underdefended base.



Even though you might not be playing a truly devious human, the level design and enemy intelligence will be enough to keep you well on your toes.

Development continues apace and the game should be available by the time you read this. You might need a few extra megs of fast RAM to play the game satisfactorily on your A1200, but check with clickBOOM at either www.clickboom.com or phone 'em up on +1 (416) 8686388.

In the meantime, feast your eyes and be secure in the knowledge that unless clickBOOM do something very silly between the demo I've played and the final game, you're really going to love the smell of this game in the mornings...

A lovely, heavy factory just waiting to start building lovely, heavy tanks for you to command. Oh bliss.





Yikes! Having decided to have a vain attempt at the enemy's barracks, he's now sent his own troops to destroy your base. Ouch!





Reinforcements arrive just in time to see your solar generator crumble to dust (right). Remember kids, don't leave your base unguarded.



Reader Games

Join us as we enter the world of the digital version of sticky-backed plastic for what are, of course, the...

ON THIS MONTH'S CD

AFCD27:-ReaderStuff-/-ReaderGames-

Almost every author featured here would be the first to admit that their games lack the professional touch. There's no fancy packaging, the game's artwork is rarely good enough to pass GCSE art and the sound would have most music teachers running for the cotton wool.

That, fortunately, matters not a jot. Here at Reader Games we're concerned with what is at the centre of all good Amiga games – the gameplay. It doesn't matter that the games look and sound dreadful, just as long as the author has tried to create a game that's fun to play.

Our years of gameplaying experience are brought to bear on each submission and we offer help and advice to the authors on how to improve their games to make them more accessible and more enjoyable.

We're not in the business of ridiculing the games we're sent (unless they're really, really awful and we just can't control ourselves, but that doesn't happen often), we're just trying to encourage the hundreds of coders out there who still want to play decent games on their Amigas.

And as a financial incentive to keep those coders at their keyboards, we offer a lovely £50 prize to the author of the month's best game. If you've always had an idea for a game but aren't really sure whether you're on the right track then here's the place to send your baby for a thorough evaluation.

So without further ado, let's see who's been playing with the egg boxes this month...

GAME: Nose of the Beholder AUTHOR: Dafydd Jones LANGUAGE: Blitz Basic 2

If you are going to pick a silly name then you should at least make it funny. Dafydd's done just that and backed it up with a rather splendid little *Eye of the Beholder* clone (as if you couldn't guess, eh?).

Pick your party of four adventurers from a mixture of classes, roll their stats until you're happy with them (make the warriors tough, give the magicians lots of spell points, that sort of thing) and off you pop to find your way out of the dungeons that await.

Everything's viewed in a first person perspective and Dafydd's the first to admit that the graphics lack any variety or inspiration. You're greeted with grey, blank walls in the main part, with black walls indicating that things are a bit further away. There are things to pick up and again, Dafydd's hardly gone to town with the paint package. In fact, it's hard to determine what a lot of the objects are (is that a spanner or a bone?). Oh, and there are black ghosty things to fight.

What makes this so good is that everything works. Right mouse click on the sword icon and swish away at the ghosts, lob fireball spells at them, call up the auto-map and see where you've been, pick the leader of the group and arrange the party's order. Everything you'd expect from an RPG of this sort is there.

OK, so it's derivative but it *all works* and it's actually fun to play, not least because the sound is so well done. Echoing footsteps resound through the dungeon as you move around and you'll jump out of your skin when you encounter your first monster.



Fighting one of the Ghosties. These fellas are surprisingly creepy and will give you a surprise when they jump out in front of you.

READER WARRANT

When you're sending in your submissions make sure you also give us:
1. An address where you can be contacted.
2. Details of the language used to create the game.
3. A recent photo of yourself.
The address to send your stuff into is:
Reader Games • Amiga Format
30 Monmouth St. • Bath • BA1 2BW
Everything included on the *AFCD* must have a reader warrant with it. Just cut it out off this page, sign it and send it in to us with your game and a recent photograph of yourself. A last reminder: if you don't include this warrant we simply won't be able to put your game on the CD – that means you won't be able to have it judged by other readers.

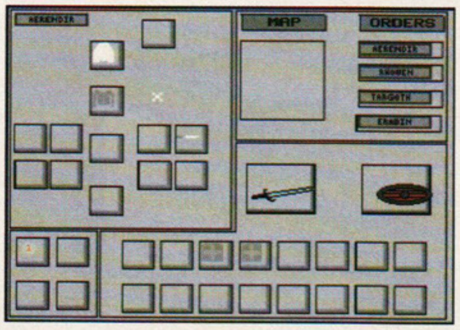
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2. The material does not contain any material which is defamatory, obscene or indecent and is exempt from classification under the Video Recordings Act 1984;
3. That there are no legal claims against the material provided;
4. That I have full power and authority to provide this material to Future Publishing.

Signature: _______________________

£50 AF Winner!

The only real problem I found with the game was the mouse's sensitivity. Click on something and nine times out of ten you'll have to click again because the game'll think you've put it down and then picked it up again immediately. It's also difficult to get it to recognise a click on the movement icons and this does tend to be slightly annoying.

The graphics may be dull and some objects unrecognisable but this is still a wonderful attempt to clone a difficult genre and certainly well worth this month's Star Prize.



VERDICT:

A dreadful looking, great sounding, annoying to play at times, Eye of the Beholder clone. Once you've discovered what all the icons are about it's actually great fun to play. The mouse interface needs work though. Let's see a more polished version please Dafydd.

GAME: KAK AUTHOR: Alex Smyth LANGUAGE: Blitz Basic 2



Rule number one – don't call your game something crap. History has proved that games called Don't Buy This! and Iznogud just don't work, so Alex's first mistake was to call his game *Kak*. All right, so it's all about some chap who lives in a land of dung, but even so, the name's just plain wrong, Alex.



The badly named, but fun to play, **Kak**. A slightly less formulaic plot development would have added a lot more to this game.

This is a shame because the game's certainly not cack. It's not the most amazing gaming experience because it's a very simplistic adventure game, almost like you'd create with the *Reality* package say, although not quite as limited.

Kak's trying to get into a castle to start a new job but has to perform a whole series of sub-quests in the usual, adventure fashion first. Unlike *Monkey Island* and games of that ilk, *Kak* uses games like *The Secret of Mana* or *Zelda* as its template. Wander around, pick the occasional thing up, chat to whoever you meet and lob lumps of dung at the baddies when you come across 'em.

Alex has put some thought into the combat part of the game as he's made the enemies become stunned for a split-second when you hit them, and if you keep on the move you should be able to avoid their shots.

The people you interact with are the conduit for the game quests in the familiar fashion – chat to them, they tell you they need something, you wander around until you find it and then give it to them and they'll either tell you who to go and see next or give you something that'll help you progress.

It's familiar but it's well done. It's not terribly engaging but it's a fun distraction for a short while and certainly a very worthy Reader Game. Keep up the good work, Alex.

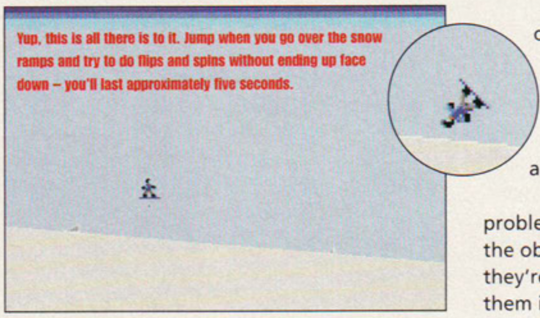
VERDICT:

A simple game that's very well put together. A more intriguing storyline and less linear plot development would've helped, but I'm nit-pickin' – this is good stuff.

GAME: Ice Boards AUTHOR: Laurence Shann LANGUAGE: Amos Pro

The big flavour of the month on console street is snowboarding so it's fitting that us Amiga gamers should now be able to join in the fun, thanks to Laurence.

If you liked *1080°* or *Cool Boarders* on the console then you're going to be a little disappointed with the graphics of *Ice Boards,* if nothing else. Forget your fog effects, forget your snowboard carving neat tracks through the fresh snow and instead concentrate on getting your little stick man (viewed side-on) down the treacherous, erm, mountains, while pulling off as many, erm, tricks as you possibly can. Without wiping out, of course.



Yup, this is all there is to it. Jump when you go over the snow ramps and try to do flips and spins without ending up face down – you'll last approximately five seconds.

There are three levels of difficulty to choose from: novice, continental and international, and essentially the differences between them are the size of the ramps the player has to jump over and the number of obstacles which are encountered.

And this is probably my biggest problem with the game – you can't just avoid the obstacles because you don't know when they're going to be coming at you. Avoiding them involves jumping a ramp before you get to them and then sailing over the obstacle to continue on your merry way. The problem is that if you've missed a ramp then you're going to hit the thing. Not that it's necessarily going to wipe you out this time, but rest assured that one will eventually.

And what can you do when you do hit a ramp? Well, if you're on-screen (some of these jumps are BIG!) you can perform all sorts of 360s, 720s and spins and rolls. What larks eh?

Actually, it's not as dull as it seems. The fun doesn't last long but it's a bit of a giggle.

VERDICT:

Well, what can I say? It looks awful, there's not much to it and it's fun for a few minutes. Can be very competitive if you've got a mate who reckons they can do better than you though, so be warned.

GAME: Conquest AUTHOR: Pete Halloran LANGUAGE: Amos Pro.

If the name doesn't give it away then the screenshots certainly do. This is a *Risk* clone, a genre that's been well represented in Reader Games in the past. This is definitely one of the better ones though.

For a start, there are three ways of deploying your troops at the start of the game: random, in rotation and through alternate choice. This is a good thing because I always remember playing this where you each got to choose where you wanted to place your armies in a vain attempt to grab a continent before the first throw of the dice.

It's also good because I remember having to play where the cards were dealt out and the countries on the cards were your start countries and this changes the whole flavour of the game.

Secondly, there are three types of computer opponent: mad, aggressive and passive. The mad computer simply attacks random neighbours without much thought about future objectives. The aggressive computer will amass forces in one particular area and fight tooth and nail to gain the advantage there.



However, the passive computer is the most intelligent in some ways, as it'll sit and gather its forces until attacked, when it will then strike back with great force and anger (hang on, that's from *Pulp Fiction,* isn't it?).

The interface is good, it's simple to play and just about the only thing I'd say could be improved would be the way the fights are displayed. It's easy enough to see which country's on the offensive but it's not until you see the defender's numbers tumbling do you know who's being attacked.

Nonetheless, this is one of the better *Risk* clones to have plopped onto our mat for a while and I'm sure you'll enjoy playing it, especially when you consider that instead of the computer opponents you could have up to five mates battling it out with you.



The red army leader hands in a set of cards, collects his troops and proceeds to go stomping all over the world. Whaddaya mean, the computer opponents are on the easy setting? Ahem. Well...

VERDICT:

A fine Risk clone that has plenty of good options. Making the attacking countries declare their intentions before they actually attack would have been nice, otherwise it's jolly lovely.

Labyrinth of Time

With the adventure fire rekindled thanks to Myst, temporally challenged Andy Smith heads off to save the world again…

Old *Format* member and veteran hairy person Tim Smith first reviewed this game way back in *AF56* when it was a new CD32 release. I have a sneaking suspicion that he didn't actually get on too well with the game as he only gave it a measly 69%.

> **A lot of time and effort has been put into letting you waste your time looking at bits of scenery…**



What the heck's this all about then? If you thought Myst was surreal, you ain't see nothin' yet!

I can understand why Tim didn't like it too much because *LOT* is a point and click adventure game that's only going to appeal to people who are really into their adventures.

The game lacks a decent interface for a start. There's no icon to turn around, so every 180 degree turn has to be executed by two left or right 90 degree turns. Grrr.

Moving the mouse around the gorgeous-looking screens gives you absolutely no indication as to whether you've found anything important, so it's very easy to miss vital clues and objects.



If only all tube stations had this art deco feel about them, life in London would surely be sweeter.

A lot of time and effort has been put into letting you waste your time looking at bits of scenery that are completely irrelevant to the plot. OK, so this is a gameplay 'feature' that's designed to suck you into the game world but in *LOT* it's overplayed.

The game's full of puzzles but don't expect them to be easy. There's a lot of time-hopping around within the game – you've been transported to another dimension to stop KIng Minos creating a labyrinth that spans space and time – so a switch thrown in this place may affect a doorway in another time, another location.

Despite the basic interface flaws (had this been made a couple of years later it would have been a lot more polished) this is still a good adventure game.

Those of you who like going around, getting stuck and then sitting back and thinking 'Oh, I wonder what that wonky lightbulb in the Saloon was all about?' will enjoy it the most.

The locations are all lovely, but they're interlaced so they don't look quite so lovely on this here page, and there are loads of 'em. The sound is generally good as well, though I agree with Tim's original comments that the sound clues are misleading.

We're now used to music and effects being context sensitive, letting us easily recognise when we're in a place of significance, but in *LOT* the tension's built up for no reason. It all sounds well and good but it doesn't actually help you at all.



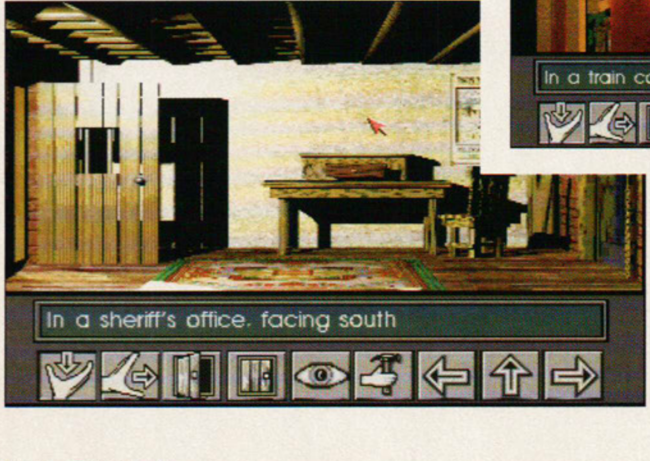


Enter the mirror maze before you're fully prepared and it's going to be a long time before you get out. And don't waste your money on Horace, either.

Is it as good as *Myst*? No. The interface is too crude and there are too many annoying bits.

Would someone who liked *Myst* enjoy this? Very probably. Though it's clumsy, the puzzles are tricky (and slightly illogical at times) and there's plenty of adventuring fun and logical and lateral thinking to be had.







PUBLISHER: Alive Mediasoft (01623 467579)
PRICE: £14.99
VERSIONS: A1200
REQUIREMENTS: 1Mb
RELEASE DATE: Out now

GRAPHICS: ●●●●○
Although not quite as gorgeous as Myst, the graphics are from the same school.

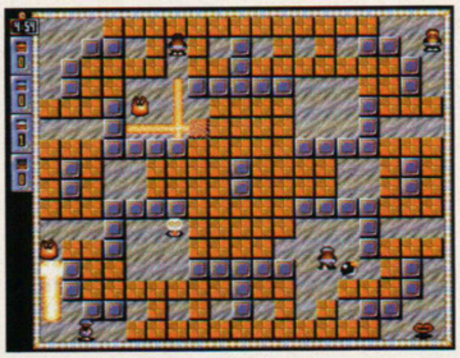
SOUND: ●●●○○
Fine, but the sound clues are all over the place.

ADDICTION: ●●●○○
The brick walls are many and you'll keep running up against them.

PLAYABILITY: ●●●○○
Shows its age by being user-unfriendly. Be ready to take the long way round everything.

OVERALL VERDICT:
What a lovely, unexpected treat. Tough, awkward and only going to appeal to hardened adventurers, but still a fine game.

80%



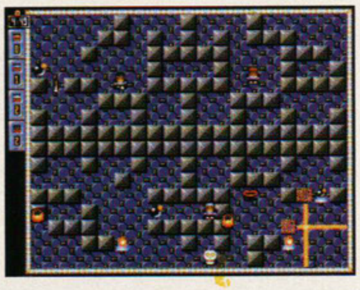
MegaBlast

Andy Smith cackles with delight as the other members of the team succumb to his devilishly well-thrown flying bombs...

The rest of the team are just such easy meat! Drop a bomb here or fling one there and someone's bound to wander into the blast. And it's not even as if they learn from their mistakes!

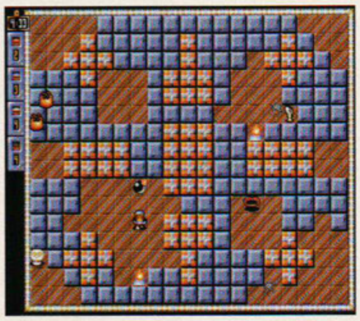
Yup, *Mega Blast*'s a *BomberMan* clone. You and up to five others can battle it out over several rounds in an attempt to be the last man standing. As mentioned before, you've got two ways of using bombs – either drop them in the usual way and run away to get out of the blast (which always goes vertically and horizontally) or you can lob them either vertically or horizontally.

These flying bombs need a little more care and attention than normal when you're handling them because they do tend to bounce off walls and they also have a rather nasty habit of exploding just when they're coming towards you.





As well as the bomb explosions, there are moving baddies to avoid as well.



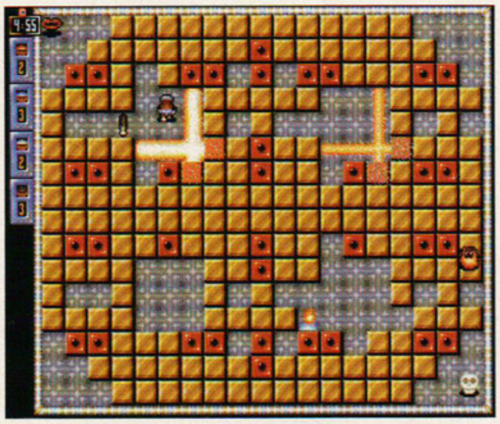
Ordinary bombs still need placing carefully because it is quite possible to drop a bomb in the wrong place and find yourself trapped and very dead.

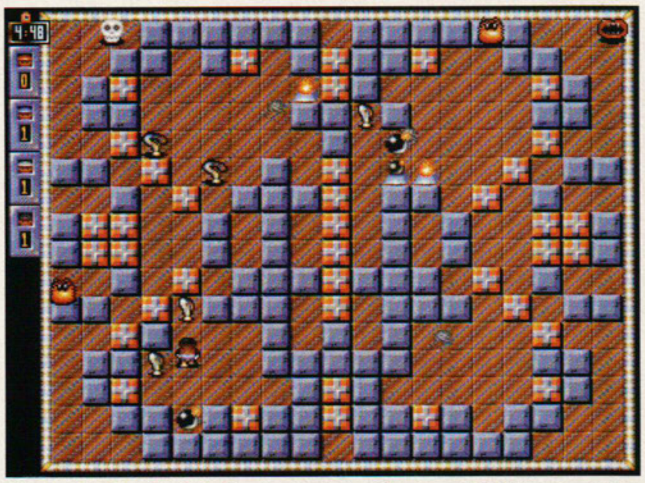
When you're playing against human opponents the last person alive is the winner, but when you're playing against the computer opponents (curiously it says two to six players on the box although you can quite easily have five computer opponents and play solo) the bout's over as soon as you die.

That's the normal *BomberMan* game but there is a slight twist if you elect to play a simple two player game. Here your objective is not only to trash the other player but also to collect as many of the diamonds that are, initially, hidden in the blocks that you blow up. Alright, so it's not that much of a twist but it does add a little extra flavour.

Running almost in the background are the baddies that bobble around the screen too. Should any of these bump into you (probably accidentally because they don't seem to target any of the players specifically) then you'll die. You won't be thinking about them a lot but they're a little annoyance to be aware of.

Then there are the specials. Collect any power-ups you find when the blocks explode and your ability to compete is usually enhanced – being able to drop two bombs at once, for example – but not everything is good for you and if you pick up a question mark special then it's pot luck as to what you get.





With the other three dead, the blue player is declared the winner. He'd better move off the vertical line with that bomb below him though, or things are going to get ugly.

"... it is quite possible to drop a bomb in the wrong place and find yourself trapped and very dead."



A cup is awarded to the winner of each bout and you can set the number needed to win overall.

Mega Blast is great fun. Each round takes place in a new arena and all the players switch starting positions for each new bout so there are no cries of 'Foul!' from people who are small-minded enough to think that just because you start in the top left of the screen you're going to win. Ahem.

For the price, this is a bit of a bargain. Obviously the more you've got playing, the more fun you're going to have, though getting everyone all connected up through the parallel port can be a pain. If you're lacking a decent *BomberMan* clone, this is the one to get.

PUBLISHER: Epic Marketing (01793 514188)
PRICE: £7.99
VERSIONS: A1200
REQUIREMENTS: 1Mb
RELEASE DATE: Out now

GRAPHICS: ●●●○○
It's varied and easy to see what's going on.

SOUND: ●●●○○
The usual Europop techno beat in the background and, erm, explosions.

ADDICTION: ●●●○○
Bouts can be very quick which means little waiting around.

PLAYABILITY: ●●●○○
Get the hang of chucking bombs around and you're sorted.

OVERALL VERDICT:
A fine game that's got a decent one player mode but is splendid fun in multi-player mode. Unoriginal but excellent fun.

82%

GameBusters

Final Odyssey part 3

And so it goes on. Amiga Format's Andy Smith gives even more of the game away in the penultimate part of our exclusive guide to Vulcan's wonderful Final Odyssey (AF106, 88%). Oh, and more besides.



The very start of the level. What dangers await our intrepid explorer? And what booty is there to find?

LEVEL THREE

You've done well to get this far but there's still a way to go. Follow these instructions and things should be a whole lot easier for you…

▼ First of all, collect that nuke from the top left of the arena and use the bomb to destroy the iron gate. Walk over the pressure pad twice to close the trapdoor and then leave by the bottom exit.

▼ Now take the bottom transporter, collect the key and return. Take the transporter in the middle of the arena and open the door you discover with the key you've just picked up.

▼ Go through the door and take the transporter you'll find there. Go up to the top where there's a red brick wall. Push the wall because one of the bricks is a switch (it's not too difficult to spot) and it'll transform the maze. After that, go back down and take the transporter again.

▼ Walk down to the bottom and throw the switch you'll find there. A pressure pad will appear behind you so step on it and then throw the wall switch again. Walk up through the door and use the transporter there.

▼ Walk up and push the switch again and then go back down and take the transporter back. You should now be able to take the right exit.

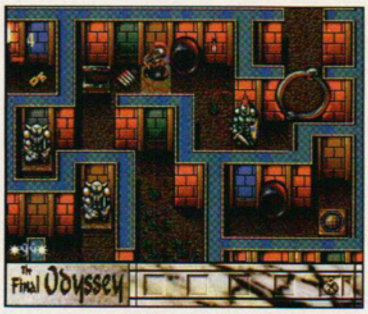
▼ Walk up through the automatic doors. There is a stone statue of a monster here and this can be pushed around the maze. To start with, push it to the left five times. Then push it down twice, now to the right six times. Push it once down again, four times to the right and then down again into the pit which you can now walk over. Remember folks, keep picking up all that money you see lying around!

▼ Right, now walk down to the other statue. This one moves as well, so push it five times to the right and up onto the transporter. Find out where the statue's been transported and push it once right, up three times, four times to the left, once down, four times to the right (and do the hokey cokey! Not really…) and then down six times until it's on the pressure switch on the floor. Once this switch has been activated, you can open the iron door and get out via the top exit.

▼ This next bit's tricky because you've got to watch out for all the monsters in this arena. Collect the nuke and walk down to the bottom left. Push the statue away from the iron gate and place a bomb where the statue was to blow up the gates.

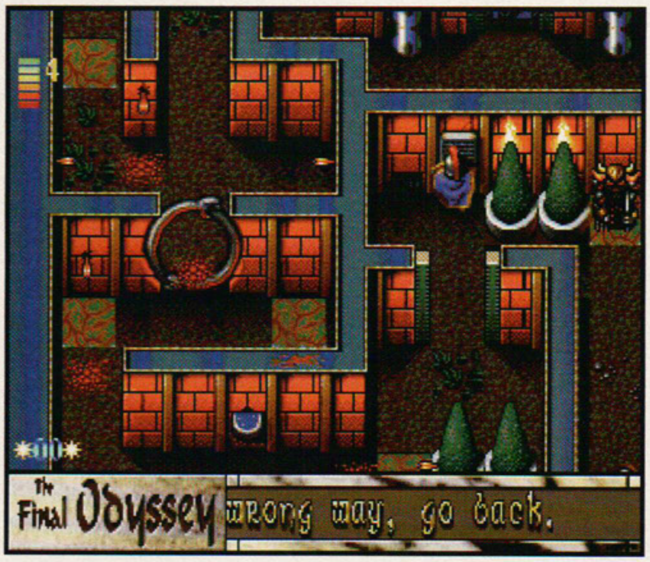
▼ Push the brick switch to activate the stairs and head underground to pick up all the money and the key that you'll find down there. Come back up and move the stone statue once to the right to reveal a keyhole. Open this door using the key you've just found and take the right exit.

▼ Watch out for the electric fields on the ground. Destroy the rotating balls



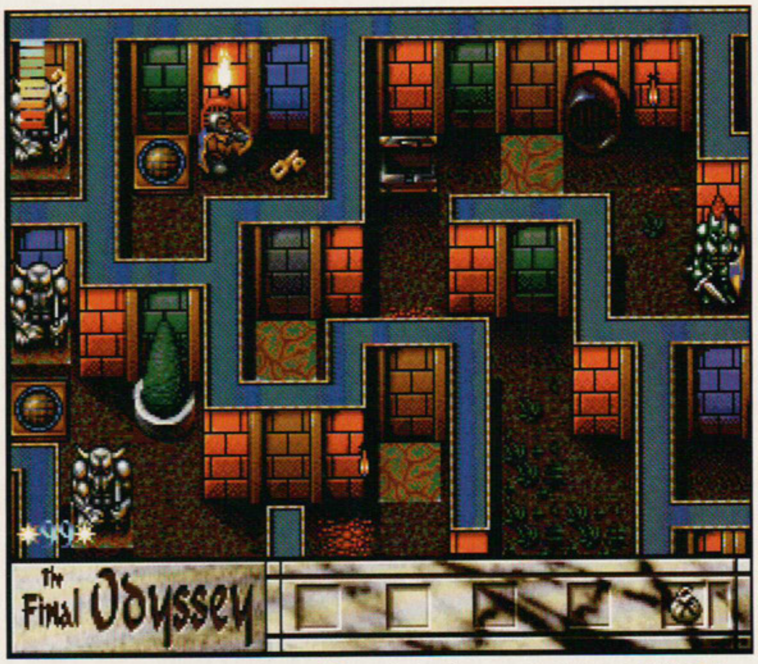
Never pass a goodie by (unless it's Bill Oddie – ho ho). And keys ALWAYS need to be collected.

You don't want to believe everything you read – especially if it's written by someone who wants you to go the wrong way…





Hit the switch and turn round to stand on the pressure pad behind you. Twice.



See a key and pick it up and all day long you'll be wondering where on earth you're supposed to use it.

that fire those pesky homing bolts at you and you should find two keys in the chests above them. Get these keys and then pick up the money in the underground section and return. Open the two doors and take the exit on the right.

▼ Head up top and blow up the iron gate with one of your nukes and then go back down past the three wall flamers and take the transporter there to the room with the line of stone statues. The fifth statue can be moved so push it into the transporter. Take the original transporter back and then take the transporter that's just above the one you're on into the little room with the blue pressure pad.

▼ Move up onto the next transporter. You should be back in the room with the statue that you've just transported. If you're not, then you've gone wrong – go back and do it again! Otherwise, push this statue two right onto the other transporter.

▼ Take the left transporter and it'll take you back to the beginning where the two transporters are. Take the top one to where the statue is now located (phew, eh?). Push the statue one up onto the blue pressure pad and a secret door on the left will be opened. Go back and walk through the door that looks like a mirror. Take the right exit.

▼ Walk through the automatic doors into the room with the pressure pads. Step on all the pressure pads except for the one on the bottom right. Collect all the money at the top and then push the stone statue on the left down. You can now move right and push the other statue right and collect the money there. Push the third statue down into the pit and take the bottom exit. Collect all the money in this arena. Walk through the automatic doors and destroy the girl in the machine. Oh yes indeedy. Just go right ahead and destroy her. Then take the bottom exit.

▼ Walk around to the top left of the arena to destroy another two girls in machines (they've gotta go…) and go back and destroy the three iron gates with the three nukes. Talk to Scylla and then take the exit on the left.

▼ There's a door with a keyhole here but you ain't got no key just yet, see? This door's actually false. Push the stone statue to the right once to reveal a switch behind it. Push this switch. Go through the automatic doors and destroy the homing spheres. Step on the pressure pad to the left, go to the top and then press the wall switch.

▼ Destroy the homing spheres and step on the pressure pad to the left. Walk down and collect the bonus items – why the devil not? You will see a set of stairs has appeared. Go underground and collect the money there and then scoot back to the surface and take the top exit.

▼ Walk to the top of the arena and chat to Ravana who you'll bump into up there. There are three guards along the top that have to be killed before you can open the exit so destroy them and head off through



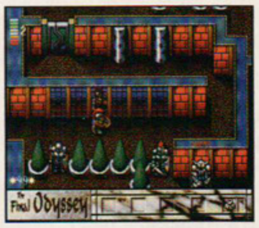


the left exit. Be careful of all the stone statues in this arena as most of 'em will come alive. Collect all the items at the bottom right and take the bottom exit. Make your way right down to the bottom. You'll notice that one of the statues doesn't turn on you, so push this once to the right and you'll reveal a switch. Naturally, you should push this.

▼ Now walk left, push the switch and then walk up and press the switch you find there. Walk to the bottom left of the arena and press the switch to reveal the exit, so go through it.

▼ There are some more girls in machines in here and you're going to have to off 'em. You're also going to have to blow up the iron gates to get through. If you've been collecting all that dosh then your money bag should be full so you can go through the familiar routine of giving the bag to Gorland who gives you an orb in return. Now take the bottom exit.

▼ Now then, you've got to use the potions wisely here as they're your ONLY CHANCE OF SURVIVAL! Take each of the transporters in turn, going counter-clockwise and stepping





(Top and above) Pushing statues around can be tricky – you don't want them to get stuck.

> "Free the girl as usual (by taking her through the tunnel of light) and your money bag should be full again."



You just know, don't you, that most of these are going to burst into life…

Helping Hands

SECRET OF MONKEY ISLAND 2

Dear AF,

Please help, we need the thread in Monkey Island 2.

S, Connor, Liverpool

Sorry, but you're going to have to be more specific. Do you mean you need something of the thread? And is that for the first part of the game or is it for the last part?

DESERT STRIKE

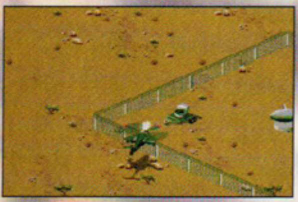
Dear Helping Hands,

Could you please give me some cheats for Desert Strike? I'd really like infinite lives, Hydras and Hellfires.

Neil Chisnall, St. Helens

Enter the password as BQQQAEZ and you'll have infinite ammo and 10 lives.





Desert Strike – nearly as good as the seminal Zeewolf.

BATTLETECH

Dear AF,

I have been stuck on Battletech for years. I'm in the Star Map Room but don't know what to do next. Can you help?

Stephen Lloyd, Warrington.

Alrightee. Enter the Map Room and then activate a combination of planets to get the password (PESHT, BENJAMIN, SKYE, SUMMET, RYERSON, KATHN, ACHERNAR). Activate the planets by touching them all, then walk over to the control panel on the west wall for your password. Leave the map room and go back through the maze to the Upper Control Rooms and turn on the transmitter in order to call Katrina.

⬅ on each pressure pad as you go. Then take the transports to reach the bottom exit.

▼ In this arena you must push the stone statues on to the pressure switches on the ground. Only when all the switches are pushed down will the iron door open. Push the statues on the left first so you don't trap yourself. In the bottom left room are four switches. Push a statue on to the bottom switch first, then the right switch, then another statue onto the left switch and another onto the top switch. Push the last statue on the floor switch near the transporter and you should be able to open the door.

▼ Take the transporter into the room with the homing spheres and destroy 'em all. Then collect all the items and head back. Take the transporter at the bottom, open the door with the key and leaving via the bottom exit.

▼ Collect all the coins here and then take the exit on the left. Push the first statue you come across into the pit and blow the gate with a dirty great nuke. Walk through the automatic door and push the stone statue down one. Walk back around and kill all the girls in machines.

▼ Walk up through the three sets of automatic doors to the statue once more. Push it to the right three times and walk back around so you can push it up once onto the pressure switch on the floor. This enables you to open the iron door and collect the key. Open the door to the bonus room and collect all the items before leaving through the top exit.

▼ Get on the one-way path and keep moving to avoid being hit by the rolling boulder. You will come across three paths heading downwards. You need to get on the middle path and then take the transporter you find there. Now go through the top exit.

▼ Kill all the guards in the random arena (don't you just hate this bit of the game? I certainly do…) and the top exit will open, so go through it.

▼ Here you're going to find loads of one-way paths but first you should head right and pick up the food bonus. Take the stairs and, as usual, collect all the money before returning to the surface. Now walk to the top and take the left exit.

▼ Free the imprisoned girl with the orb and take the bottom exit. Take the transporter and use the stairs to go underground. Collect the money there and return to the surface. Take the transporter back, destroy the three iron gates with nukes, collect the coins and take the bottom exit.

▼ Free the girl as usual (by taking her through the tunnel of light) and your money bag should be full again. Take the top exit and make your way back to Gorland for the last orb.

▼ Take the top exit, then the right one, then the top one and then the right one. You should now be back where Gorland is. Get the last orb by giving Gorland your full money bag.

▼ Walk back the way you came to get to the second girl. Free her and take her to the tunnel of light as with the others. Go back to where Gorland is (find your own way. No, simply follow the route above).

▼ Now take the left exit and the next left one again. Walk through the automatic doors, take the transporter and destroy the two girls in machines.

> **"Walk through the automatic doors and destroy the girl in the machine. Oh yes indeedy. Just go right ahead and destroy her."**



A brief respite from the attention of the monsters can be found in the underground sections. Phew.



You will learn to hate these spinning ball things because they're just too damn accurate.

Return. Walk up through the three circular doors and take the top exit. Destroy the girl here and then leg it back to where you came from.

▼ Walk down again and around through the wall spikes. There's a combination switch here so push switches one, three, four and six to reverse the one-way paths allowing you to get through. Leave by taking the top exit.

▼ Get through the random maze in the usual manner, destroying the guards, then take the top exit.

▼ Walk up to the left of the electric floors. When the arrow reaches the top opening, push the stone statue right to trap it. This allows you to walk back over the electric floor tiles without being hit by the arrow.

▼ There's a secret door in this arena. In the room with all the statues there are three along the very bottom. Push the middle one left once and up onto the blue pressure pad. The secret door will now open so collect the key and open the other door with it before taking the top exit.

▼ Make your way through the maze carefully, avoiding the boulders (and remember to use your potions wisely). You'll come across a switch at the top right of the arena. Push it and you'll transform the maze.

▼ Make your way into the middle of the arena where you'll find an amulet. Pick it up, then go back and push the switch again. Go back down again and this time make sure you leave through the bottom exit.

▼ When you've got the amulet you have to return to Ravana. To get back to him, follow this route: take the bottom exit, then the right one, then right again. This should take you to Gorland. Head right again, then take the top exit, then the right one again.

▼ You should now be with Ravana so give him the amulet and he'll give you an iron rod. Take the bottom rod.

Helping Hands



Things have gone horribly wrong. Time to start this bit all over again. Ho hum, here we go...

▼ Press the wall switch, walk through the door, press the switch there and take the right exit. Walk up to Scylla and chat to her. She should now give you the secret to the combination switch below. Push in the first two switches and then the last two. The chap guarding the exit will now disappear so you can leave.

▼ Here you want to push the switch and take the transporter. Step on the pressure pad and then take the transporter back. You can now get on the one-way path. Press the switch at the end of the path and take the bottom exit. Head through the maze and destroy all the creatures before taking the bottom exit.

▼ Walk right and step on the pressure pad but take care to avoid the arrows. Step on the transporter that's just below it. You're now in a room full of statues (they liked their statues in those days, didn't they!) and the fifth statue can be moved.

▼ Push this statue down twice, once right and then up onto the transporter. Take the transporter back and walk up and around to the automatic doors.

▼ Walk down and take the transporter you will find at the bottom. You'll now find yourself in a tiny room with the transported statue just above you. Now you should push it up onto the blue pressure pad and then take the transporter that the statue was sitting on.

▼ Walk up through the secret door and collect the key. Walk down and push the second stone statue up twice onto the transporter. Use the right transporter in order to get back to where you started.

▼ Push the stone statue you just transported one left, up three times and down eight times so it goes into the pit. This will let you walk over it. Now use the transporter and take the exit on the left.

▼ Get through the labyrinth, destroying all the monsters, and take the top exit the exit into yet another random arena. Get through the this in the usual way and leave by taking the top exit.

▼ This is an area with a vortex in it. You've got to shove the iron bar you've got into the fan generator in order to destroy the computer. Now take the top exit.

▼ This next arena is full of fall-away tiles that give way and fall after you've stepped on them and it's dead easy to get trapped here so it's best to save the game before you try this!

▼ Once you've found a route through, take the left exit. Make your way through the maze collecting the nukes and take the bottom exit. Destroy the iron gates one by one, using your nukes, until you can take the bottom exit. Finally, you should take the master exit to reach level 4.

Now you should give yourself a huge pat on the back because that was a really difficult level. However, now you have to get ready for next month's final solution when we take you through levels four and five together. Until then...

BREATHLESS

Dear Helping Hands,

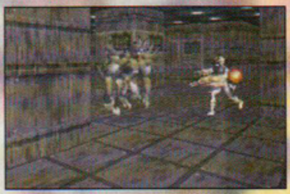
I've had Breathless for about a year now and still can't get past level one. Have you got any cheats or level codes?

Barrie Parnell, Upwell.

No cheats as such Barrie, but here are some level codes. As you can see, there are a couple of versions depending on which version of the game you have.

Level 1.2 18WSGGJKL13JSE2W
Level 1.3 1KOSDHGOL7HJSEQV
Level 1.4 17DCDRVQMWHJSEQQ

Version 1.1
Level 1.2
181CEICWL13PGOQW
Level 1.3
181C8VWGMQ3PGOQV
Level 1.4
181CUBW2NN3PGOQQ





You don't wanna go down there, mate. You want to go home and hide.

SIMON THE SORCEROR CD32

Dear *AF*,

We were given a CD32 just after Christmas with some games. One of the games our grandson loves is Simon the Sorceror but he's stuck in a couple of places. How can he get into the Dwarf's mine? How do you get the gold coins from under the dragon? And how does he get past the loose plank under the swampling's house?

G. Ward, Sheffield.

Well, he should have picked up the stone by the entrance because it has a password written on it and he should be wearing the beard that he cut off the chap in the pub. He should also be carrying a beer barrel and this is what's needed to bribe the guard who the accountant will wake when you try to sneak past.

To get the gold coins, give the dragon the cold remedy. Cast the hook you should have at the boulder on top of the cave's entrance and climb up. Tie the magnet to the rope and lower it down the hole to get the gold coins.

To get past the loose plank, simply hammer in the nail you should be carrying, then walk across to Skull Island.



It's the Dodgy Geezer – the one with the voice like the bloke from Withnail and I. Oh, you know, "Cool your boots, my friend," and all that.

THE STRANGERS AGA

Here are the level codes for Vulcan's rather lame beat-em-up:

Level 2	DEAD
Level 3	FAKE
Level 4	FOXY
Level 5	PUKE
Level 6	FAMI
Level 7	MAGO
Level 8	ROXY





Action! That's stretching things just a little in The Strangers.

CANNON FODDER

Dear *Amiga Format*,

I would be most grateful if you could send me some information on Cannon Fodder I and II. Please include some cheats and tell me how to get into the secret areas. Thank you.

Sharon Cooper, Boston.



War has never been so much fun. Or so easy.

You'll like this one, Sharon. On Cannon Fodder I, go to the save game option and when the game requests a name type JOOLS. 'Cheat mode active' will flash at the bottom of the screen and the ranks and abilities of your men will have increased.

SEND US YOUR TIPS!



If you've got some hints, cheats, tips or general good advice on any Amiga games – especially some of the newer ones like Uropa2, Bograts or whatever, then don't keep 'em to yourself – send 'em in so we can pass 'em onto other gamers who might be having more problems than yourself.

Also, if you've got a query about a game (and, no, I don't really mind people asking about The Secret of Monkey Island), then drop us a line and we might be able to answer it in Helping Hands.

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PD Select



The ever-eager **Dave Cusick** sifts his way through another selection of PD and Shareware software.

Floaty

BY: E Park
WARE: Free
PD LIBRARY: F1 Software
NUMBER OF DISKS: One
PRICE: 80p + 75p P&P

Back in the days of 8-bit computing, games like *Floaty* used to proliferate. It's a simple platform-based game with a straightforward objective.

The gameplay is so uncomplicated it can be summarised in two sentences, which is perhaps just as well because it's all the instructions consist of: "Guide Floaty around each screen trying to collect all items as he slowly floats down on a cushion of air blown up by the two air fans. Floaty has a limited time to do this in, for each level." There are just three keyboard commands you'll need to know in order to play, discounting for a moment the pause button. Pressing the Space Bar causes Floaty to jump – the longer it is held down, the higher he leaps. Pressing O and P move the brown blob left and right respectively.



***Floaty* is incredibly simple and very addictive to play.**

There doesn't appear to be a joystick control option, which adds to the olden-day appeal of *Floaty* to some extent. However, this is still a bit of an irritation when, like me, you've become used to using a joypad.

You will have to become quite adept at manoeuvring *Floaty* very quickly if you are not to come a cropper with the blades of the helicopters, which seem to home in on his position with alarming

BOXING MASTERS

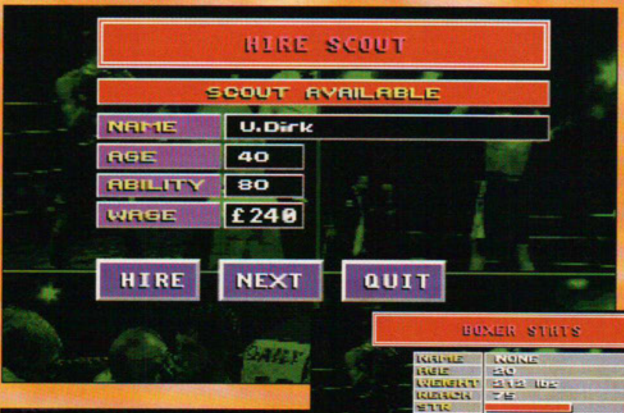
I've never been a big boxing fan. I'll watch the odd fight if nippy boxers are involved – I reckon Prince Naz is always quite entertaining, even if my soft spot for him stems largely from my having seen him arriving at a Sheffield nightclub just as I was leaving one night a couple of years ago. I don't have much time for slow sluggers, though.

If you do, or if you're just after a challenging managerial game that's a little bit different from the norm, then you would do well to get hold of *Boxing Masters*.

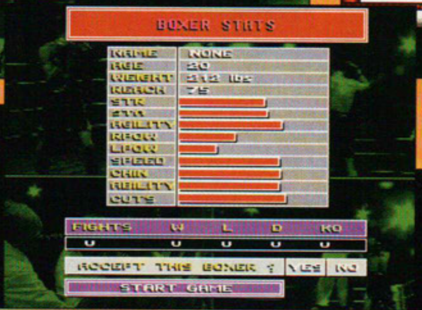
You take on the role of a boxing manager who must look after a group of boxers, recruiting trainers, scouts and so on, organising fights and generally taking care of all their interests.

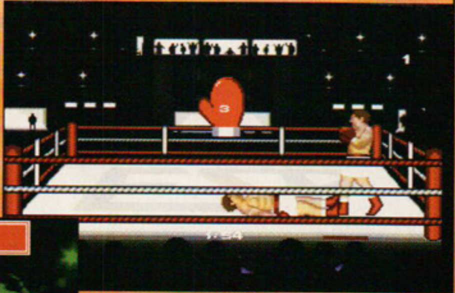
Fancy pitting your #100-ranked newcomer against the world #74? Then you'll need to ensure that everyone gets a satisfactory fight purse and adequate time to prepare. Feel your fighters have been suffering through a bad media image? Then send them along to open a supermarket or make a speech at some function or other. Not happy with the fitness levels of your young charges? Then get yourself a better physiotherapist and a new trainer. The game features animated fights and lets you take control of the boxers when they are in the ring if you wish to.

Alternatively, you can let the computer take care of the action and concentrate solely on the managerial side of things, although you can still suggest the appropriate strategy for your boxer to employ. Typically for an F1 Software licenceware game, *Boxing Masters* is a polished product. There's a great deal of depth in this simulation, making it something boxing fans will really be able to get their teeth into.









The ups and downs of the gentleman's sport in *Boxing Masters*.

BY: Paul Dowers
WARE: Licenceware
PD LIBRARY: F1 Software
NUMBER OF DISKS: One
PRICE: £3.99 + 75p P&P

SPACE STATION

Selection of the month

I was watching *Channel 4 News* a couple of weeks ago when I received something of a fright. Towards the lower end of the running order, sandwiched between an item on the Queen Mother's hip and some equally mundane story, John Snow introduced a two-minute piece which explained that, in all probability, humankind will be destroyed by the impact of a mile-wide meteor one day in October 2028.

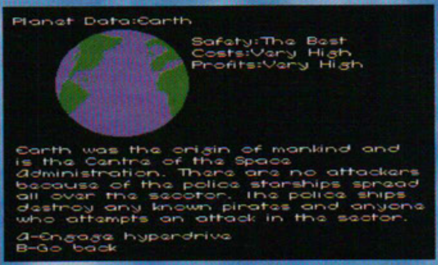
If you've not heard about this (which is perfectly conceivable, given the way in which the media broadly ignored the story), allow me to explain the situation. A meteor of this size is widely believed to have killed the dinosaurs by creating so much dust that sunlight could not penetrate the earth's atmosphere, causing plants and animals to die out.

If a meteor of this size landed in an ocean, tidal waves would flood many major cities and a great many agricultural areas. It is not certain that this meteor will hit the earth – it could simply pass within a few hundred miles, providing a spectacular light show, but do you want to take the risk of it hitting?

Channel 4 had drafted in a couple of "experts" to talk flippantly for a couple of minutes about how giant lasers could be constructed to deflect the meteor, but it seemed to me that many more questions were raised by the news than even a full, hour-long news special could have hoped to answer.

In the pub that night, and on several subsequent occasions over the next few days, my friends and I explored at great lengths exactly the sorts of things we'd get up to on the last day of civilisation as we know it.

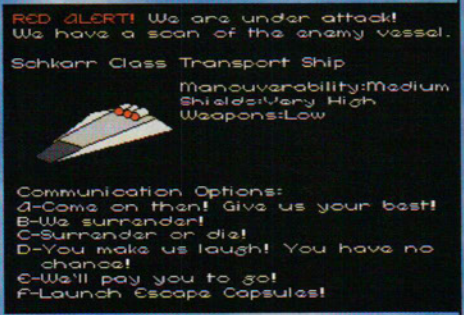
For instance, if everybody thought the world was going to in a few days, how late would they leave it before they jacked in their jobs? In the final days and weeks, money would become irrelevant – there'd be no need to earn it, because there'd be nowhere to spend it since shops wouldn't have any staff.



Space Station could be good practice for those who think that Earth could be hit by an asteroid...

Society as we know it would break down completely. There would be looting and all manner of violence – there'd be no law enforcement workers, and even if there were, who would be deterred by the threat of a lifetime prison sentence if that lifetime was only to last for a few days? Even if the meteor ended up eventually missing, humankind could quite easily wipe itself out in its certainty of its own imminent demise. Just a thought, anyway.

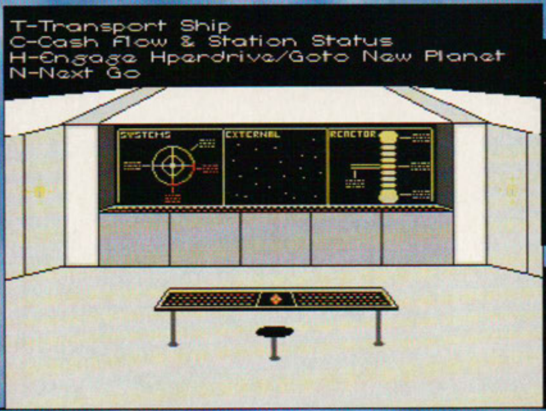
The reason I mention the probable end of humankind on the earth is that it's just possible that by then there may be human beings elsewhere in the solar system. NASA's recent announcement that water has been found on the Moon has opened up the possibility of a lunar station being established within the next decade or two, and various sources are proclaiming that holidays on space stations for the super-rich may be just around the corner.

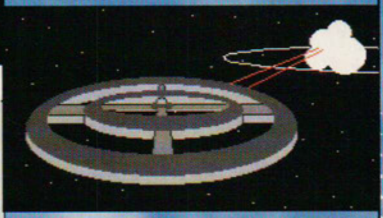


Space stations have always held a certain charm for a great many people thanks to films like Stanley Kubrick's epic *2001: A Space Odyssey*. Now you have the chance to operate your very own space station with this interesting new game.

Although *Space Station* can be run directly from the floppy disk, by default the program looks for pictures in the Work:space_station/pics directory, so you will need to make the appropriate assigns if you've not installed the game to the Work partition on your hard drive or the game will refuse to load.

Technically, *Space Station* is a fairly simplistic affair, being composed of a series of pictures, linked together by a program which accepts a variety of keyboard commands. Interestingly though – and proving that good ideas for games can transcend technical limitations – the whole thing works very nicely. The game is available directly from the author, who promises a free mystery commercial game to the 1st, 100th and 1000th customers, which must be almost all of us these days...





BY: Stuart Walker
WARE: Share
PD LIBRARY: Available from author
NUMBER OF DISKS: One
PRICE: £3.50 (overseas add £2)

speed. Insofar as the action itself is concerned, *Floaty* could have been a Sinclair Spectrum game from around 1984, although the graphics are quite colourful and the author has put some effort into providing some nice sampled sound effects to accompany Floaty's various actions. The music which plays on the introductory screen could scarcely be described as tuneful, but that's so often the case that, in my old age cynicism, I expect little else. *Floaty* isn't going to pose much competition for your attention compared to something like *Quake*, but it's an enjoyable enough diversion. Just don't expect cutting edge gameplay.



That retro computer gaming feel in *Floaty*. Just watch out for the helicopters...





Continued overleaf ➡

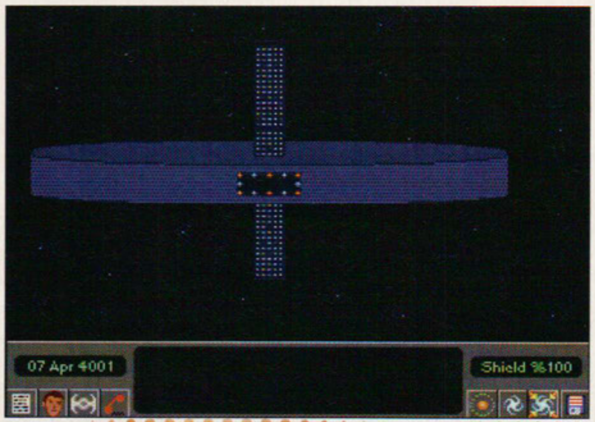
Conflict: Federation II

BY: Gordon Miller
WARE: Free
PD LIBRARY: F1 Software
NUMBER OF DISKS: One
PRICE: 80p + 75p P&P

Picture the scene (says he, in his best Alan Coren voice). It's the year 4001 and you have just graduated from the military academy. The generous souls there have gifted you a starship, a wad of cash and orders to annihilate as many criminals as possible. It seems the GALACTIC FEDERATION (I capitalise it because the *Federation II* instructions do, and I rather like the way it causes the words to leap out at the reader…) want various rebel groups wiped out.



You can trade (above) or decide to become an assassin, taxi driver, etc.



The main threat to the GALACTIC FEDERATION comes from the EMPIRE, an amalgamation of previously INDEPENDENT systems. The upshot of this convoluted and over-capitalised scene-setting is that in *Federation II* you must travel through a troubled galaxy, exploring or making money through trading, acting as a courier or a taxi driver, or becoming a hired assassin or a bounty hunter.

You can choose to work your way up through the ranks for the Federation (I'm all upper-cased-out now), but you don't actually have to. A nice militaristic space theme tune accompanies the opening screens, and atmospheric music plays throughout the game in a manner somewhat reminiscent of GameTek's *Frontier: Elite II.*

Indeed, in spirit and in design, *Federation II* owes an awful lot to that title, although you won't find quite the same excitement in the space flight sequences or the same depth of gameplay generally. At times, the interface can also make it a frustrating experience trying to get to the screen you want to view.



Nevertheless, *Federation II* is a competently produced piece of software, and space adventure enthusiasts (now there's a specific societal group for you!) are sure to find it wholly absorbing.

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THE MR UNLUCKY SERIES

A year or so ago, PD Select used to receive rather more submissions each month than it does nowadays. There simply wasn't space to include all of the submissions in the magazine, and so things which I didn't include were methodically filed away in a drawer full of disks somewhere, to potentially be dug out at times when, as in the past couple of months, PD Select really didn't receive many submissions at all.

Back in July 1997, a bloke called Mike Hayes sent in a pile of disks for possible review. They contained ten animations featuring a stick-figure character called Mr Unlucky, lovingly crafted using *DPaint* and described by their creator as "Ten of the worst drawn and most badly animated cartoons you are ever likely to see". Although extremely simplistic in style, they were all pretty colourful and some involved some fairly humourous storylines.



Just one of the Mr Unlucky animations. You can also follow his escapades at Christmas, Bonfire Night, etc.

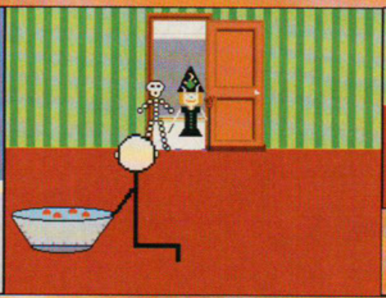
Unfortunately, the Mr Unlucky series was filed in a drawer (along with the accompanying letter and an SAE, so I'm sorry for not having returned the disks sooner, Mike!).

The other day I stumbled across the disks, stuck them in the drive and thought, "What the heck. They're not bad, and some of them are a bit of a laugh" – such is the careful quality assessment process to which all PD Select submissions are subjected.

The ten titles in the series cover Mr Unlucky's experiences at the seaside, on Bonfire Night, at Christmas, when buying a car, on holiday and so on. The silent animations tend to run rather too quickly on an expanded Amiga, so you might need to disable your accelerator if you have one before loading. And Mike – a belated response to your question about transferring your masterpieces to video without the aid of a Genlock, which I'll include in case you've not managed to find a solution.

You should be able to get hold of a cable to connect your Amiga's video output to a VCR Scart input, which ought to do the trick. Failing that, you should be able to use the composite output of your Amiga as the aerial input on your video. If you have problems with the quality of the picture, you'll have to tinker with the UHF tuning on your video, which is always good fun if you're bored on a Sunday afternoon.







Mr Unlucky ends up as a frog in the Halloween animation. That's unlucky.

BY: Mike Hayes
WARE: Free
PD LIBRARY: available from author
NUMBER OF DISKS: ten in series
PRICE: 75p P&P

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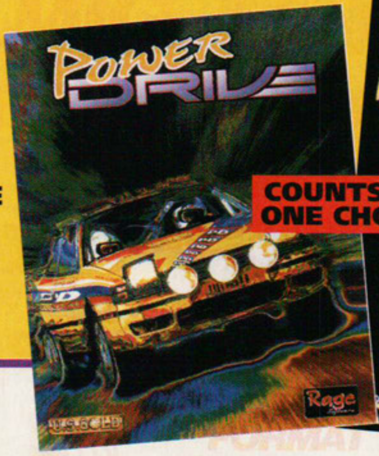
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SERIOUSLY AMIGA

In-depth reviews of hardware and software that you can trust.



Fie on those unhappy, low-powered fools that have been mailing me this month arguing that the Amiga is down the pan because playing *Quake* on it is impossible. I know this isn't the games section, but we in "Seriously Amiga" have been pushing accelerator boards, extra memory and graphics cards like there's no tomorrow, and finally we've been vindicated.

If you want to play *Quake* then you must have a decent Amiga, but it'll also mean that your machine is brilliant for serious stuff too. You'll be able to render faster, multitask better and use larger screens.

Without doubt, this game is one of the best things to happen to the Amiga for quite some time.

Ben Vost

AMIGA FORMAT'S REVIEW POLICY

...is very simple. ***Amiga Format*** is staffed by some of the most experienced Amiga users in the world and what we say goes. OK?

WHAT OUR REVIEW SCORES MEAN

90+%	The crème de la crème. Only the very best, most versatile and effective products are awarded an ***AF Gold*** – the most highly prized rating there is.
80-89%	These products are very good, but there are minor flaws or areas that could be improved upon.
70-79%	Not a bad product but quite possibly one that needs a serious update.
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50-59%	Below average products which are unlikely to impress your mates or your wallet. Avoid.
40-49%	Overwhelmingly poor quality products with major flaws.
Under 40%	The absolute pits.

56 IMAGEFX 3

A new version and new features, but have new problems also been introduced? **Ben Vost** looks into it.



Cor! look at the previews on that!

60 DIGITAL CAMERAS

They're all the rage, but is the hype deserved? **Nick Veitch** looks at two new cameras and lets you know the score.

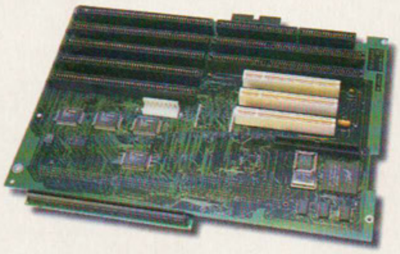


Click and it's in your Amiga. How's that for fast?

62 PERIPHERALS ROUND-UP

Nick Veitch presents the latest range of tower add-ons.

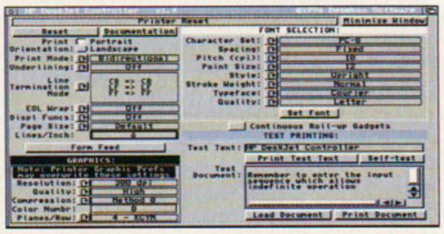






67 DESKJET 400L

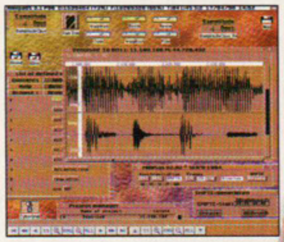
Simon Goodwin tells you all about it.



You don't have to spend fortunes on print software.

68 SAMPLITUDE

It may be the king of sampling software, but is it any good?



Colourful and powerful and comprehensive.

70 LONG TERM TEST

This month's long term test sees *DrawStudio 2* come under **Jamie Winter**'s microscope. It wriggles around, you know.



This MUI-based drawing package has proved to be very popular.

71 SHOP WATCH

Since we don't just cover the UK, here are some of the shops around the world that have been recommended by you.



Buying stuff by mail order is all very well, but...

72 WORKBENCH

Questions, questions, questions. Will you never stop? "Hope not," **John Kennedy** whispers under his breath.



It's a Zip Plus drive. You can't get it to work. We can.

76 AMIGA.NET

Still can't find an Amiga version of *ICQ*? **Dave Cusick** explains why.



***ICQ* as it would look on an Amiga.**

ImageFX 3.0

Ben Vost assesses the new version of possibly the world's favourite image processing package for you.

Nova Design's Kermit Woodall will be demonstrating the *IMageFX 3.0* software on stand 149.

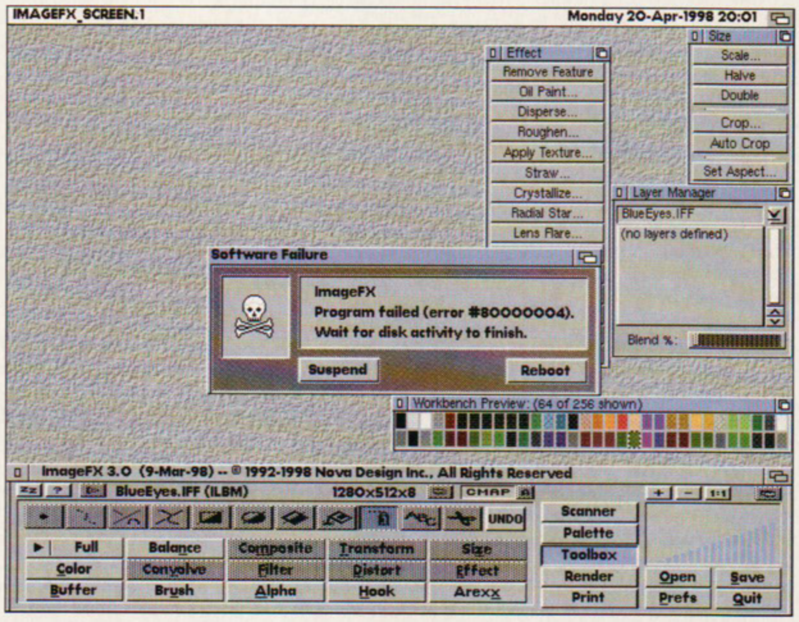
The first time I used *ImageFX* was when it came out as version 1.15. Until then, I had been very happy with *ADPro* and used that exclusively for scanning and image manipulation, although I was sorely disappointed that the new version (2.5) didn't use its visual aspects better.

Then Jeff Walker, with whom I was working at the time and whose name should be familiar to long-term Amiga owners, talked me into playing with *ImageFX*. He used it constantly for cropping scans and using the unique

> **One problem was swapped for another with screen problems, colour problems and clipping problems...**

Unsharp Mask filter to remove the "scan" lines from scanned images.

I tried it, I liked it well enough, but didn't really like all those buttons out on display with menus and submenus hanging off them. I felt that although *ImageFX* was undoubtedly more powerful than *ADPro* and it used the visual element of the Amiga well, it just wasn't very easy to use. Even so, I bought a copy to add to my arsenal of graphics packages and time went past and I carried on playing with it.



Get used to this when you start playing with *ImageFX* because the version we reviewed was not amazingly stable.

Version 2 came and went and the last anyone heard of *ImageFX* was version 2.6, which came out some time ago, so it was a pleasant surprise to hear about version 3 and to have it plonked down on my desk.

If you're one of those people who didn't like having to deal with *ImageFX*'s fairly nasty interface and unfriendliness towards graphics card owners (even with the *CyberGraphX* preview module added to 2.6), you'll be quite pleasantly surprised. If, on the other hand, you were looking for a complete overhaul of *ImageFX*'s user interface, you may be left with a slightly sour taste in your mouth.

Let me explain. Very wisely, Nova Design have decided to ditch the layered screen approach from earlier versions, going instead for a windowed approach which is far friendlier for graphics cards generally and is the same as the *CyberGraphX* preview found in earlier versions (you still have the option to use it old-style). This means that instead of only having one buffer for the main image that you can see, you can now see all the images you want loaded.

Handily, much like Directory Opus, the images now have extra detail in their title bars that tell you whether you are looking at your main or swap image. A new addition to version 3 means that menus, such as the Effects menu, can be left on screen and even get saved as part of your preferences when you quit.

However, this transition isn't perfect and you'll get used to the good ole Guru at the start of your exploration of the new features. And there are plenty of new features, from the fact that redraws take place asynchronously, allowing you to get on with editing your image even

FX FORGING AHEAD

***ImageFX*'s other new, lauded addition is *FX Forge* and it really seems to be worth all the praise heaped on it. The way it works is that you can have mathematical expressions evaluated for the R, G and B channels of your image, and also for the alpha channel. You can have variables which are controlled by sliders (up to seven of them). Like an ARexx script, it isn't compiled so it'll be slow, but it opens up what you can do with *ImageFX* immeasurably. Also, because of the way these expressions are set out, the scripts themselves don't have to be very long and you can give your variable sliders names and default values too.**

The very best thing about *FX Forge* is that you don't have to worry your little head about having to work out the sin(cos/tan)2, blah, blah, if you don't want to because there are loads of people out there at university doing it for you. That's right, there are hundreds of people all over the world working on expressions that you can use in *ImageFX*. And if you're thinking it's odd that they are all using *ImageFX*, the truth of the matter is that *FX Forge* is directly compatible with *Filter Factory*, a plug-in for *Photoshop*. The only difference is that original *Filter Factory* expressions can be compiled and made into standalone plug-ins. *FX Forge* can't understand them once they're in this format (binary files with the extension .8bfs).

Again, this is where being on the Internet can be a big help because there are whole websites devoted to filters and even a mailing list, details of which can be found in the *ImageFX* manual.

The only possible trouble you'll run into is the fact that the Macintosh evaluates trigonometry functions with a different range to PC filters, so if your script doesn't work, try altering these fields. However, it doesn't say in the manual which type *FXForge* supports.

One of the better sites I found to give the source for the expressions rather than fully fledged plug-ins is the following:
http://www.kt.rim.or.jp/~takinami/ffworks/ffHome.html

LAYERS AND LAYERS

The biggest new feature of *ImageFX* is the ability to have layers in a picture, but this isn't the first Amiga image processing package to do so. The classic *TVPaint* had layers, and since the middle of last year, *Art Effect* could use a rudimentary layering function. Unfortunately, it is not saved in the same way that *ImageFX* saves its layered pictures.

***Art Effect* uses new chunks in the IFF ILBM file to do so, which means that any ILBM viewer can see the pictures, whereas *ImageFX* uses a completely new file format to save its in – something that only *ImageFX* can read. *ImageFX* can also save as a *Photoshop 3.04* document now, but in my copy of *Photoshop* I can't load them in (that's *Photoshop 3*) and neither can our art editor (with *Photoshop 4*). The question has to be asked – what's the point? Admittedly, you may spend all your time using *ImageFX* as just an image editor, but it's not quite a universal package just yet – for instance, its text handling still leaves something to be desired.**

while it redraws, to the fact that the ludicrously small previews are now available in three sizes, with the largest just about suitable for a hi-res mode like Productivity, but better suited to graphics card screens.

There haven't been that many new features added but it would be quite a difficult task to think of something that *ImageFX* couldn't do. However, one of those things was working with layers.

I say "was" because, as of this version, you now have the ability to have as many layers for an image as you can handle, with as many of them as you want being masks for other layers (unlike *Photoshop* where you can still only have one mask per image).

ImageFX is definitely getting better all the time. In days gone by, it was hard to use and limited, now it's just hard to use. There are loads of glaringly obvious improvements that could be made to it – well, glaringly obvious to me, anyway.

The first is providing load and save functions for all the parameters for the effects. The problem is that so many of the effects have umpty ump parameters so there's no way you're going to

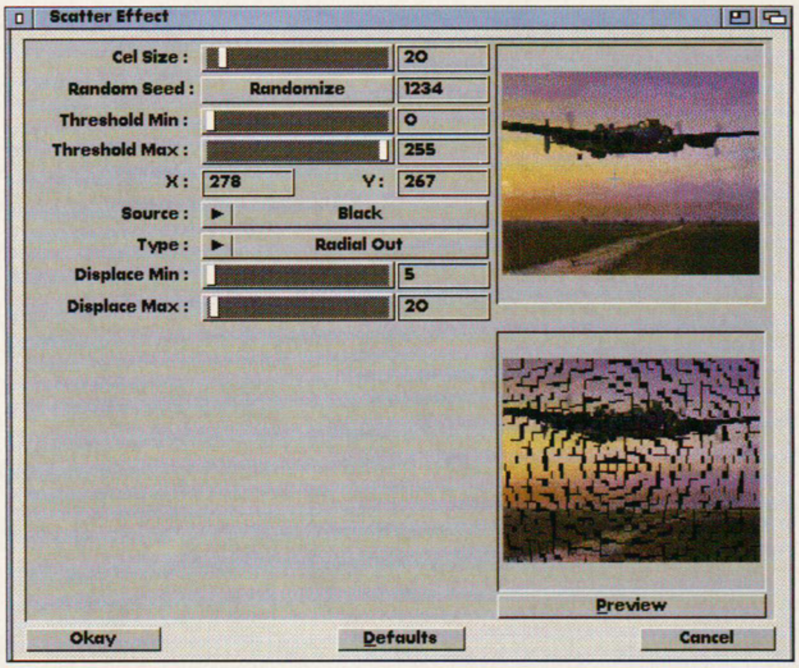
> *... it's more like a scientific image analysis program than an art package, thanks to the amount of control you have...*

remember them all for the next time you want to replicate an effect. Sure, it might be a messy thing to do, having loads of parameter files in a directory that won't work with the wrong effect, but that's up to the user. The way it's currently implemented means that you have to write down what you're doing every time, and I have a notebook filled with parameters that I know will work.

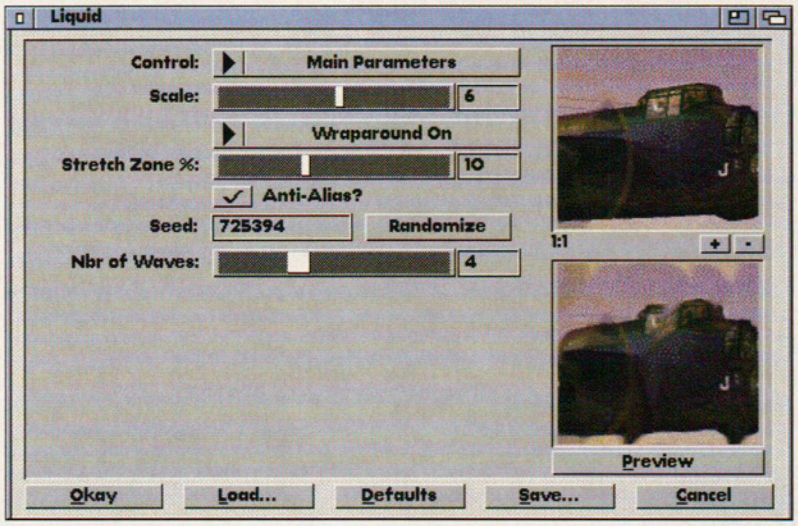
On a related point, *Lightwave*'s defaults give you a decent, if uninspired, picture every time. *ImageFX*'s defaults for the effects tend to give you a mess, although this has improved over the last few versions.

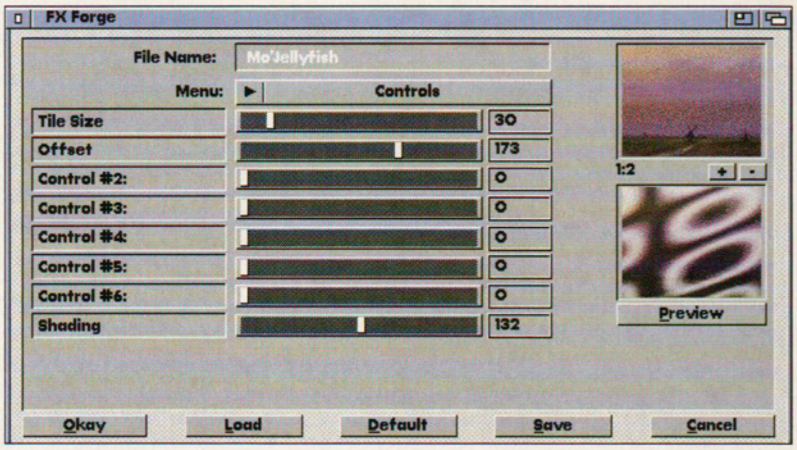
I really don't want to give this package a kicking, but for a piece of software that's had this many revisions, to ignore things like that, especially with all the "inspiration" it could take from other graphics packages around it, is very annoying. I would much rather have had to wait until Christmas for this package in the hope that it would be perfect, but I know software has to get released to keep a company liquid.

Having said that, in the first few hours of playing with *ImageFX* I had pictures in ILBM format that wouldn't load into IFX (but would load into almost anything else I tried), I had



The new previews can be one of three sizes, but unless you have a graphics card, it's really hard to move a larger image around the preview window.





Continued overleaf ➡

crashes while trying to change preferences, a file saved in *Photoshop* format that wouldn't load into *Photoshop* and preview windows I couldn't move.

I haven't been able to experiment with *ImageFX* in the way you need to in order to discover its amazing depths because I've been brought short every time I tried. Of course, if I had a graphics card in my machine here then it might be a different story.

I tried *ImageFX* on another *AF* machine armed with a CyberVision3D and things improved somewhat, but not to any great extent. One problem was swapped for another with screen problems, colour problems and clipping problems with brushes.

You couldn't even use the layers properly on either machine. As an example image, I wanted to used a layered effect to show off effects like lightning and fire. I created a new fresh layer for the image I was using and started the lightning effect. I got the "line" in my image and got a preview if I hit the preview button in the window. It looked good so I hit okay, and... nothing happened. My image didn't seem to have been changed at all.

However, when I went back into any effects window, it showed me my lightning strike. If I flattened my image I lost the lightning altogether. This must mean that the only way to put lightning on a separate layer in an image is to create a new image and compose the two together. This is hardly satisfactory – I could do that in the previous versions.

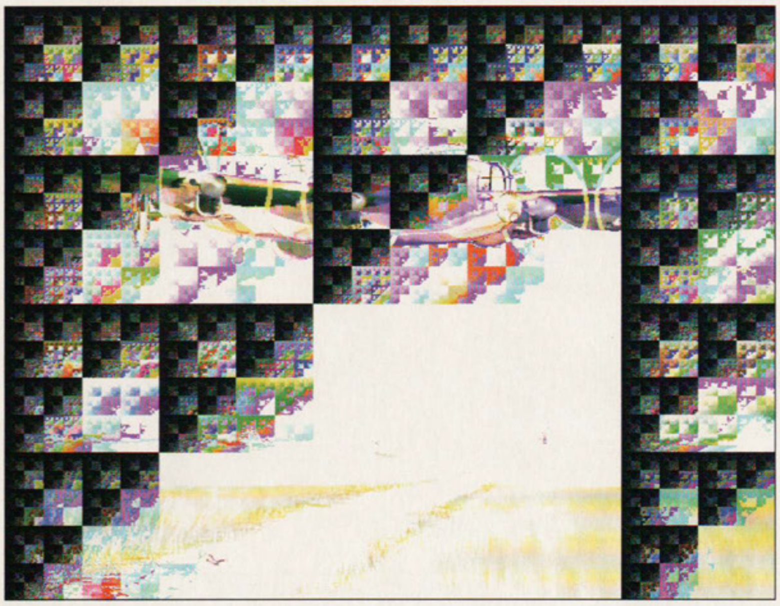
So, all in all, *ImageFX* is a superb piece of software. It has features you'll probably never get to use because you're too busy trying everything else.

In some instances it's more like a scientific image analysis program than an art package, thanks to the amount of control you have over your images, and this new version gives you loads more tools to use and new ways to use them.

But, and it's a big but, it hasn't been tested enough. I can only recommend buying or upgrading to this version if you aren't going to rely on it for time-critical work, because otherwise you might find yourself very frustrated by it.

However, the same was pretty much true for *ImageFX 2* before 2.1 and 2.6 came out, and Nova Design are very helpful with support over the net, so it's not as though you won't be making a good investment. I just hope that the cost for fixing all the problems with version 3 won't be too much.

NICE ENOUGH	NEEDS IMPROVEMENT
New windowed interface with asynchronous operation.	The overall interface is just as confusing as it ever was.
Layers offer new methods of working and much more power.	But don't work properly and aren't "Amiga-standard".
Much better preview windows.	But not sizeable and don't accurately reflect the effect worked on.
New module-based effects.	
Somewhat better GUI.	Non-standard gadgets aren't always properly font sensitive.
Modularity means that *ImageFX* is ideal for PPC conversion.	Overall, the program should be more stable before going into other territories.





ImageFX's effects are marvellous – the top image was created using the *FXForge* utility and the bottom one was done with the hackneyed, but still useful, PageCurl hook.

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MANUAL: ●●○○○
Only an update to previous versions.

ACCESSIBILITY: ●●●○○
Not as easy to use as it could be.

FEATURES: ●●●●●
If I could give this six points I would.

VALUE: ●●●●○
A truly professional package that will suit every occasion.

OVERALL VERDICT:
A brilliant bit of software let down by not enough beta testing.

80%

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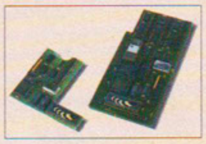
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Digital Cameras

As more software emerges, Nick Veitch looks at two solutions from different ends of the price spectrum.

Camphotolab will be available from stand 152 and the *PowerDC* software and camera from stands 118-120.

Olympus Camedia

AMIGA GOLD FORMAT



Digital cameras initially fell into two distinct camps – either they were digital novelties or jolly expensive, top-notch equipment. Essentially, the quality of the pictures on the more affordable cameras (in other words, under £1,000) was sufficient for undemanding websites or tiny snaphots.

The Olympus Camedia C-820L is part of the second wave of cameras which give quite good results without you having to mortgage your Amiga.

Boasting a high quality mode with a 1024x768 resolution, you can finally get something approximating a decent resolution. By contrast, standard print film offers equivalent resolutions of tens of thousands of "pixels" by tens of thousands. But a 1024x768 image could be printed at around 3"x2.25" in this magazine without you noticing the difference. At this resolution, a digital camera begins to look quite useful.

You will only get 10 shots at this size in the standard 2Mb memory card, compared to 30 on the "normal" setting of 640x480, but with a digital camera you can easily delete the shots you don't want, or get an extra memory card.

If you set the optional non-compressed HQ mode, you'll only get four shots on a 2Mb card so additional or bigger cards will be a necessity.

Some of the extra features seem a little gimmicky. Does anyone really need to print pictures directly from the camera? Only, I suspect, if they don't have a computer.

There is a cunning-sounding panoramic feature which automatically joins a series of images together, but sadly this relies on host software support, which basically means it only works with the PC at the moment.

Sequence mode is interesting. The idea here is that the camera snaps nine images instead of one, each 0.1 seconds later than the last, creating a composite frame. The only problem is that this only works in the standard resolution mode, so the individual images end up as 212x60 pixels – in other words, you'd be hard pushed to recognise anything.

In the end, the results are sharp and colourful. Also, thanks to the compensating CCD metering, for the most part they're perfectly exposed. As with all progressive scan CCDs, there is a chance that fast moving objects will be blurred, but most of the shots that we took were pin sharp.

This camera also offers a composite video out and a connector for an external power supply, which is extremely useful as it goes through batteries very quickly indeed.





The HQ images from this camera can easily be used in print without fear of pixels.

DISTRIBUTOR: Olympus (also available from Eyetech)
PRICE: RRP £779, High St. price £559

OVERALL VERDICT: An excellent camera which performs well, looks good and, for a camera in this performance range, is pretty cheap too.

91%

CAMPHOTOLAB

It's all very well taking pictures, but you have to be able to download them for them to be of any great use. This is where the Amiga scene is only now beginning to catch up.

CamPhotolab from Eyetech is intended to be a generic camera management program which will eventually work with a number of different cameras.

When you run this software, all you initially get is a small button bar which will allow you to select various save, show, print or delete options. Yes, there is a print option, but as the link between the camera and your Amiga is a serial one, it is tediously slow. It also only works with *Studio* or *Turboprint*.

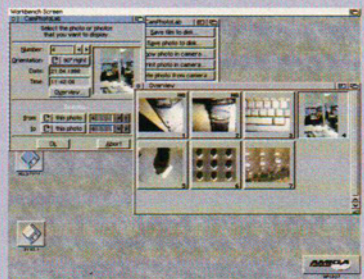
You can choose to download all the images at once, select a range or just choose a single image to download. All the downloaded images will be in JPEG format and stamped with the date and time they were taken as a comment, which is handy.

When downloading the entire film, you are prompted for a directory but nothing else. This can be annoying because all the pictures end up being saved with filenames like "001", "002" and so on. It would have been more useful to select a base pattern name.

The requestor will display thumbnail images from the camera, which it caches so you don't have to download them each time. If you want to see all the thumbnails at once you can do so in the overview mode, which can also be used to select images for downloading.

The Range selection gadgets are useful but a bit fiddly to use, and, for some reason, in the "show" mode they don't include a first to last photo option, which is odd. Because of the threaded design of the software, it is impossible to use any of the menu items when you have one of the show or save windows open, which is slightly inconvenient.

At the end of the day though, the *Camphotolab* software works without any significant flaws and it is pretty easy to use. Hopefully it won't be very long before the software is expanded so that it can take advantage of some of the Camedia's more over-the-top features.



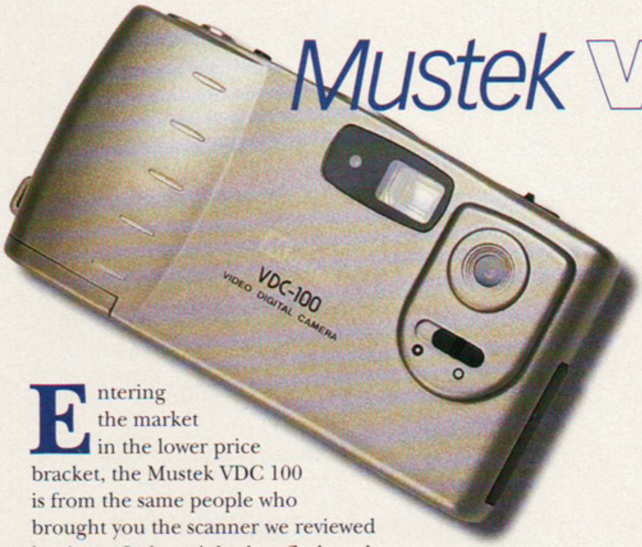
CamPhotolab works well and supports many of the camera's features.

Distributor: Eyetech 01642 713185
PRICE: £39.95

OVERALL VERDICT: The results are good but some parts of the software work counterintuitively. It does support most of the camera's features.

85%

Mustek VDC-100



Cameras come in many shapes and forms, but I can safely say this one is pretty unique.

Entering the market in the lower price bracket, the Mustek VDC 100 is from the same people who brought you the scanner we reviewed last issue. It doesn't look as flash as the Olympus, and at a fifth of the price you wouldn't expect it to. Understandably, it also lacks some more of the advanced features, and indeed, some of the basic ones you might like to find on a camera – there is no flash for example.

> When the CCD gets too much light, the image breaks up and seems to rasterise like an interlaced image...

What it does offer works fine though. You can take pictures with it. The resolutions offered are 320x240(standard) and 640x480(high), with the camera having built-in memory to hold 10 high resolution images.

A two-digit LCD display on the top shows you the number of frames taken, and a flashing LED lets you know when the camera is busy or its memory is full.

The most annoying thing about this camera is its inability to cope with bright light. It comes equipped with a smaller aperture switch for bright light conditions, but as to what constitutes bright light... well, that's up to you.

When the CCD gets too much light, the image breaks up and seems to rasterise like an interlaced image, with disastrous effects for the image you actually wanted to take.

If you do get the setting right, the camera takes a halfway decent picture. With no onboard viewing screen, it is difficult to tell until you get it back to your computer, though. In fact, this also makes deleting frames rather tricky, unless you can connect it to a monitor to see which ones you really don't want.



SOFTWARE

When we brought you the first digital camera software for the Amiga there were already a number of these devices on the market. In the time between then and now, more software has emerged, but there are still very few cameras that are supported by more than one software package.

The result is that we can't review the software (or the cameras) against a common standard.

In these reviews we have tried to separate the reviews of the camera from the reviews of the software as much as possible.

It has a standard composite video output on the side, which is unheard of in a camera in this price bracket.

Unfortunately, the VDC-100 generates an NTSC signal, so you will only be able to view it in mono on the likes of a 1084 monitor. However, with the requisite adaptor and a modern TV with SCART inputs, you should be able to get full colour.

As you can power the VDC-100



The VDC100 is more dependent on light levels. Get it wrong and the image is blurry(above) or too dark to see.

from an external power transformer, it could be a more versatile replacement for CCTV or web-cam use perhaps. It is certainly very handy for leafing through the images currently in the camera.

Although it is rather simple, the VDC-100 does represent good value for money. However, you should think carefully about what you really want out of a digital camera before you actually decide to buy.

DISTRIBUTOR: Power Computing
PRICE: £99 including software

OVERALL VERDICT:
A basic camera, which has its flaws. For the price, it works well enough.

81%

POWERDC

***PowerDC* takes a simpler approach to communicating with the camera. There is only one main panel, which always opens on Workbench, and it is of the functional, rather than stylish, variety.**

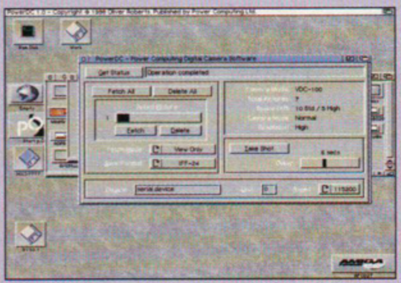
As the VDC-100 doesn't support thumbnails, there aren't any. Neither, obviously, is there an overview function. However, much of the space on the interface is taken up with a rather useful status report on the camera, which indicates which mode the camera is in, how many frames it has left, what resolution is selected and so on.

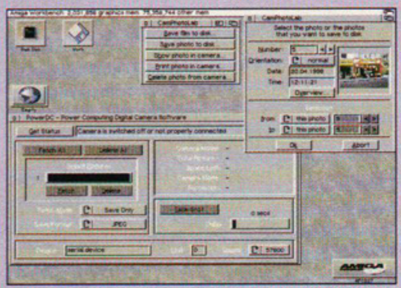
There are many preferences for how pictures are displayed and saved. Pictures can be shown on their own screen or in a window on Workbench, or even externally if you set the icon's tooltype.

The internal viewer makes use of datatypes, some of which are supplied if you don't already have them. Unlike the *CamPhotolab* software, the *PowerDC* software supports saving in several different formats, including 24-bit IFF and PNG, as well as JPEG and further datatype support.

Usefully, the *PowerDC* software also has a "remote control" option, which allows the software to instruct the camera to take a picture. You can even specify a delay for those moments when want a picture of yourself, but don't have any friends around to take your photo.

About the only problem I could find with the software was the lack of a progress display when downloading. I know that it only slows things down and takes up space, but it's quite nice to be able to see that there is actually something happening.





The *PowerDC* software isn't as colourful as *Camphotolab* because there are no thumbnails to display, but it is a lot more straightforward.

DISTRIBUTOR: Power Computing
PRICE: Free with the camera!

OVERALL VERDICT:
Simple, with many nice features and an uncluttered interface.

86%

Peripherals Round-up

There'll be loads to see at the World of Amiga show this year, including heaps of peripherals for your A1200 tower. Nick Veitch investigates.

Zorro 3 backplane for Power Tower

See these items at the World of Amiga show, May 16th & 17th, Hammersmith Novotel, London. Stand 114.

The difference between Zorro II and Zorro III is a simple but profound one. Although the slots are exactly the same and you can still plug exactly the same cards into them, the Zorro III bus is multiplexed. Half of the cycle is used for addressing, and half for data so Zorro II devices can run much faster, and be more flexible.

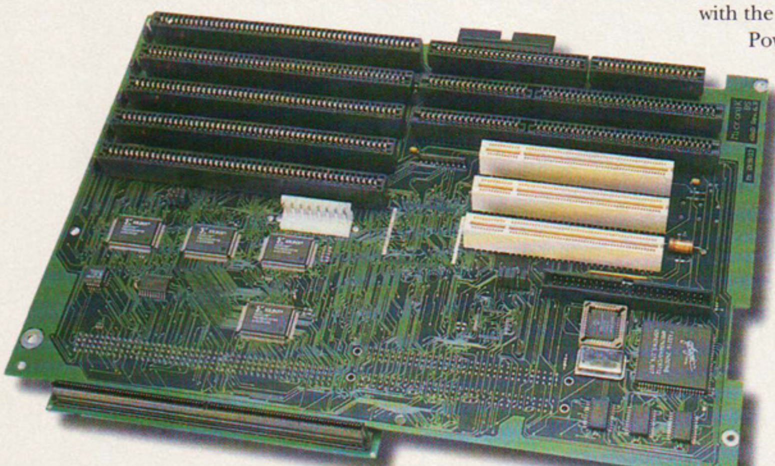
A number of devices over the years have been Zorro III only, including the Retina Z3 card, (which was, at the time, the fastest graphics card around, and still very fast for animation work), the V-Lab Motion card, which provided real-time JPEG motion capture for non-linear editing purposes, and a number of SCSI controllers like the 4091.

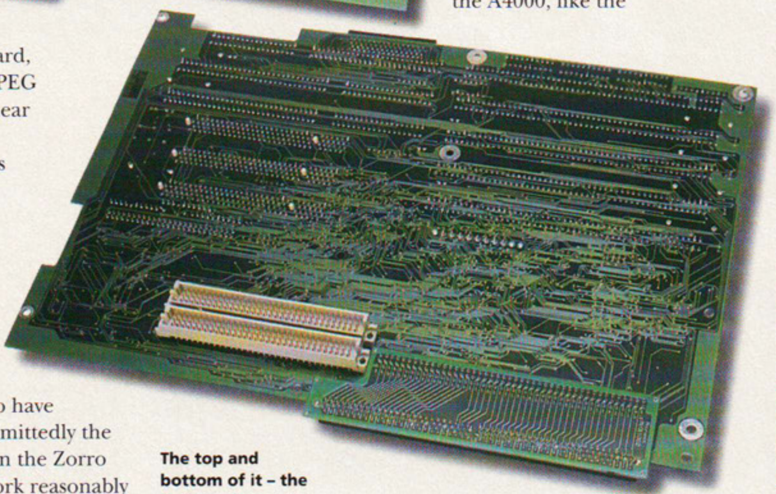
In modern day use, most Zorro III-compatible cards, such as the CyberVision 64/3D and the Picasso IV, will work in Zorro II or Zorro III mode, so it isn't essential to have Zorro III by any means. Admittedly the cards will perform better on the Zorro III bus, but they will still work reasonably well on Zorro II.

Installing the backplane into the tower is pretty easy. Unfortunately, it does require you removing the side panel with the attached A1200 motherboard. This isn't really that difficult, but it does mean disconnecting virtually everything.

Once the side panel is out, the Zorro board attaches to the side panel with the sturdy metal spacers provided.

> "... a welcome addition, if only for the fact that it makes connecting internal SCSI devices considerably easier."





The top and bottom of it – the MicroniK Zorro III busboard in all its glory.

Power is then fed directly into the Zorro backplane, which powers the motherboard through the trapdoor expansion connector. A small pass-through allows you to add any accelerator card onto the trapdoor slot as well, although this is not entirely useful, as we will see.

One of the major advantages of the Zorro III board is that it has a standard Amiga processor slot. This simply means that you can use processor cards designed for the A4000, like the Cyberstorm, Warp Engine or even the original Commodore cards.

The Cyberstorm PPC cards exist in much faster combinations than the Blizzard PPC603e and they also allow more memory to be added. Unfortunately it is also necessary for this slot to be populated if you want to use Zorro III cards. It is not possible to enable the Zorro III multiplexed addressing in any other way. This makes any existing accelerator card you have rather redundant as you can't run two processors at the same time.

The other additional feature of this backplane is an on-board SCSI interface. You probably already have a SCSI device on an accelerator card or a Squirrel unit, but this is still a welcome addition, if only for the fact that it makes connecting internal SCSI devices considerably easier.

The specific "problem" with the card is that the Zorro III side of things won't be as fast as it is on a "native" Zorro III machine like the A3000 or A4000. Since that is the only point in having Zorro III, the price difference between the Zorro II and Zorro III backplanes seems more difficult to bear.

It might be nice to have a CPU slot and slightly faster graphics card access, but is an extra £160 really worth it? Also, bear in mind that you will have to shell out for an A4000 processor card in order to use it.

I'm not saying that this product has been ridiculously marked up so the manufacturers could make lots of money. I can quite believe that the production is sufficiently difficult and the components sufficiently expensive to merit the RRP, but I am questioning whether the result is worth the price you have to pay.

DISTRIBUTOR: Power Computing
PRICE: £319.95
REQUIREMENTS: A1200 in a suitable tower casing

OVERALL VERDICT:
It does work, and it does do what is claimed, but do the results justify the cost? Only you can decide.

82%

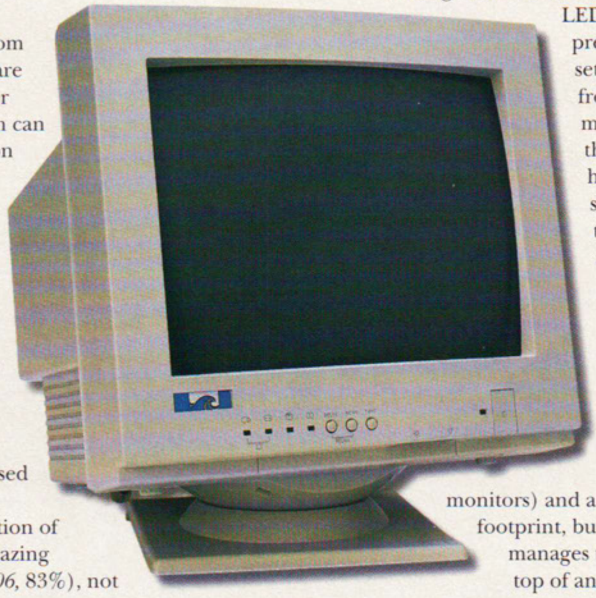
VGA Monitor

See these items at the World of Amiga show, May 16th & 17th, Hammersmith Novotel, London. Stand TBA.

Getting a monitor will probably make as much difference to your life as adding a hard drive, especially if you have been using a TV as your Amiga display. However Amiga monitors tend to be fairly basic. In fact, apart from the Microvitec ones, there are no big monitors (i.e. greater than 15") and none of them can handle the higher resolution displays from modern graphics cards such as the Cybervision.

On the other hand, there are many VGA and SVGA monitors available for the PC market which are a) huge and b) capable of handling 1024x768 screenmodes. The only problem is that they won't display the 15KHz modes used for lores on the Amiga…

However, with the addition of the included Grand TV Amazing (which we reviewed in *AF106*, 83%), not only can you scandouble modes to work with the monitor thanks to the included cable, but you can watch TV on it too.



Not that attractive, but what monitor is?

The monitor itself is rather plain-looking. It has the now traditional LED and button preference settings on the front for manhandling the vertical and horizontal into shape, and also to allow you to adjust it to get the pincushion effect.

Physically, the monitor has a 13" visible screen (common for 14" monitors) and a rather deep footprint, but it still manages to easily fit on top of an A4000.

Its display specification is more interesting. With a horizontal scan frequency from 31 to 50KHz, it can easily display 1024x768 without breaking into interlace (ideal for graphics cards) and it gives a rock steady performance in 640x480 modes like Productivity. A dot pitch of .28mm is up to standard and should save your eyes too.

All in all, a very good value bit of gear if you want to use high resolutions or have a graphics card.

DISTRIBUTOR: Golden Image
PRICE: £199.95
REQUIREMENTS: None.

OVERALL VERDICT:
It will give you a steady, high resolution image at a fairly reasonable price.

80%

Arowana 56k Modem

See these items at the World of Amiga show, May 16th & 17th, Hammersmith Novotel, London. Stand 118.

AMIGA GOLD FORMAT

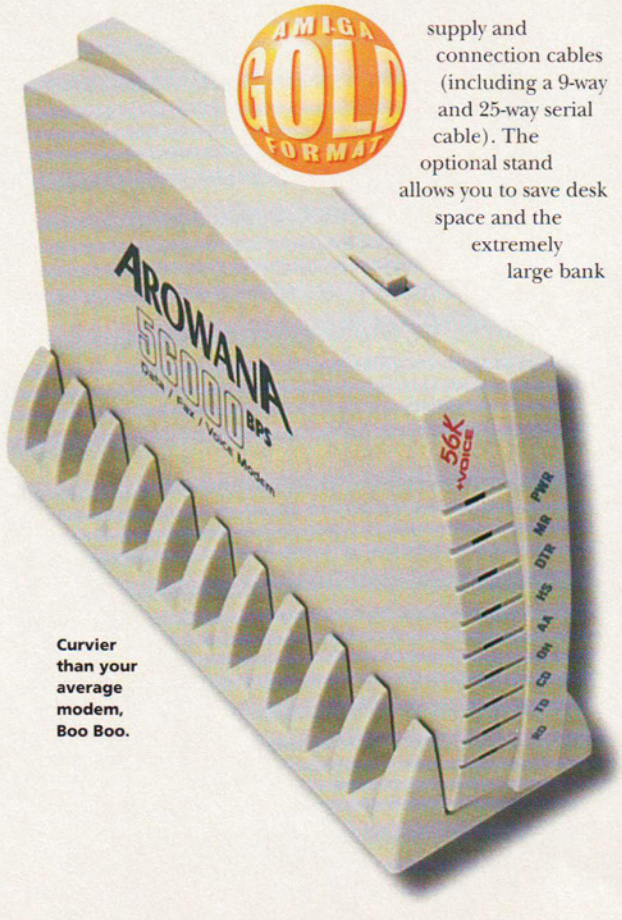
Modems were different in the old days. Well, they were slower for a start. And bigger. And they cost a lot more. And you had to worry about things like: was your modem Hayes compatible? Did it have a high REN value? Could it support MNP level five, or just level four?

These days, by and large, the once diverse field of modems is slowly coming together. Even the dispute about the best protocol for 56k modems is over now, with both camps combining to form the v.90 standard. As modems now generally have upgradeable flashROMs, even this isn't a problem.

There are no real compatibility issues to worry about. Most 56k modems sold now will support the v90 standard, as this one does. Most modern modems include voice and 14400 CCIT FAX support, as this one does. Most modems still in working order in the world today are Hayes compatible, as this one is.

The only real issue with a 56k modem is whether your Amiga will be fast enough to keep up with it. If you want to get the best out of this modem on an A1200 you'll need a Surf Squirrel or similar high-speed serial port.

This particular model is lightweight, comes with its own compact power supply and connection cables (including a 9-way and 25-way serial cable). The optional stand allows you to save desk space and the extremely large bank of flashing lights lets you know that something is actually going on – as well as making you wonder how much of the circuitry inside the box is there simply to drive the LEDs on the front.



Curvier than your average modem, Boo Boo.

During tests in conjunction with a Surf Squirrel, the modem only failed to connect at 56k once, which was probably due to interference on the line (BT don't guarantee you will be able to run a 56k modem on your phone line, or even a 14.4k one).

The problem could also lie with the Internet service provider I was using for the test, as not all are fully geared up for a load of people connecting at 56k.

DISTRIBUTOR: Power Computing
PRICE: £99.95 for bundle with Internet software
REQUIREMENTS: A fast serial port.

OVERALL VERDICT:
Excellent value for a reliable and attractive modem.

90%

Internal Scandoubler

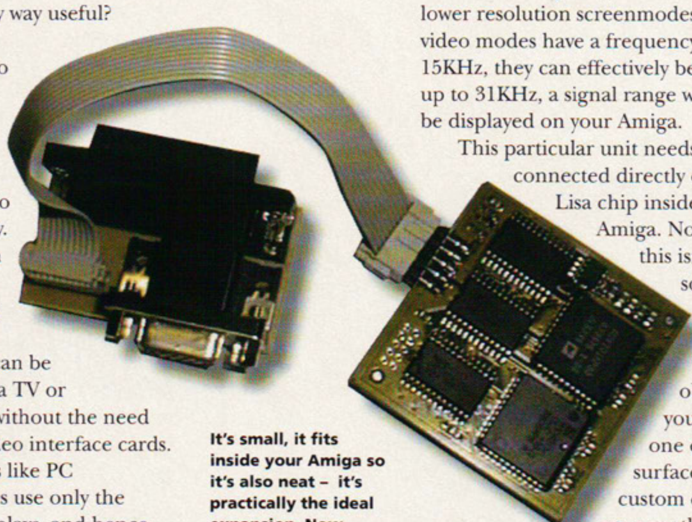
Even someone with no notion of video technology could probably hazard a good guess at what a scandoubler does – it doubles the scans. And why is this in any way useful?

The Amiga was designed to be able to display true composite video signals so it could interface seemlessly into the existing video technology of the day.

That's the reason why the Amiga is so useful for video work – because it can use screenmodes which can be directly displayed by a TV or recorded by a video without the need for modulators or video interface cards.

Other computers like PC compatibles and Macs use only the higher frequency displays, and hence video equipment such as genlocks are much more expensive on these systems.

Unfortunately, it also means that although the Amiga's output can be displayed on a standard PC VGA monitor in its higher resolution modes, it cannot be displayed in the lower resolution modes.



It's small, it fits inside your Amiga so it's also neat – it's practically the ideal expansion. Now, how well does it actually perform?

A scandoubler simply doubles the horizontal frequency of the Amiga's lower resolution screenmodes. As these video modes have a frequency of 15KHz, they can effectively be brought up to 31KHz, a signal range which will be displayed on your Amiga.

This particular unit needs to be connected directly over the Lisa chip inside your Amiga. Normally this isn't something to be taken lightly as, obviously, if you damage one of the surface mount custom chips on your motherboard, the repair bill is going to be very steep indeed. However, in this case the card is small and the socket sturdy enough to keep it stable. In fact, it took quite a bit of effort to remove it again.

The internal card connects via a small flylead to the external converter. This converter certainly isn't pretty but it works. It plugs into the RGB socket at the rear of the Amiga and it provides a standard VGA socket for connecting a PC-type monitor.

The flylead can be run out of the back of the keyboard case without much trouble, but be careful not to sever the wires!

The result is a stable image displayed on a low cost, readily available VGA, or better, monitor.

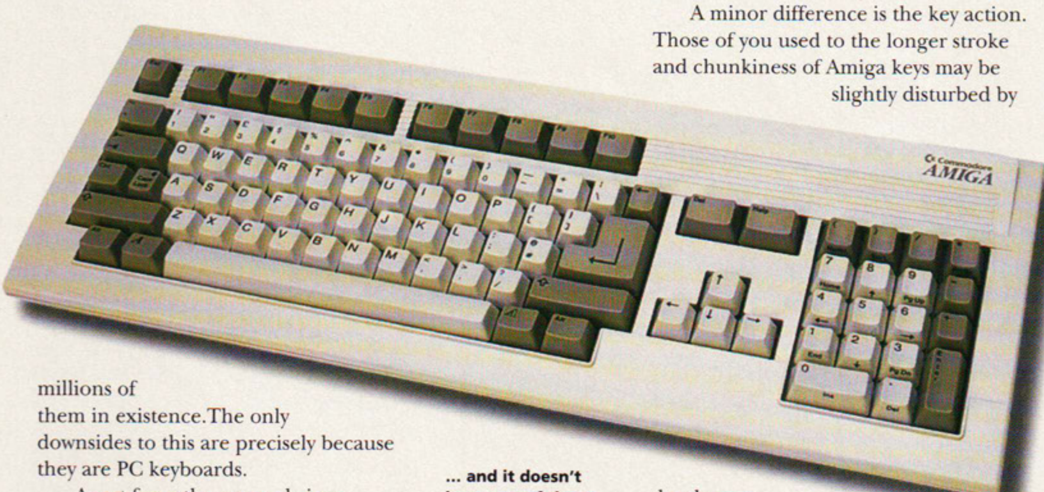
DISTRIBUTOR: Power Computing
PRICE: £59.95
REQUIREMENTS: Any AGA Amiga.

OVERALL VERDICT:
It's ugly but it works. It isn't too pricey either, if you consider the alternatives.

88%

Amiga Keyboard adaptor

Most tower systems allow you to plug in a standard PC keyboard. This is a sensible solution as the interface isn't terribly hard to make and PC keyboards are very cheap, mainly because there are millions of them in existence.The only downsides to this are precisely because they are PC keyboards.



... and it doesn't have any of those nasty "Windows" keys on it.

Apart from the more obvious limitation of having "Win-95" stamped all over them and detestable Windows symbols on the keys, there are more fundamental differences.

The first is that although a PC keyboard has plenty of keys, they tend to be in the wrong places and remembering which one is your Control key and which is your left Amiga key can be tricky at crucial moments. There are often difficulties with multiple key presses, as well as using modifiers.

A minor difference is the key action. Those of you used to the longer stroke and chunkiness of Amiga keys may be slightly disturbed by the shorter, clickier PC keys, and it is something to consider if you spend a lot of time at the keyboard.

Wave all of those problems goodbye with this proper Amiga keyboard. Designed for the A4000, it attaches to a backplane socket via an adaptor (the socket should also take an A2000/A3000 keyboard). The unit on the backplane then attaches, via an inverted socket, to the motherboard of your Amiga.

This shouldn't cause any problems (though make sure you get the orientation correct), and it will give you a perfectly compatible keyboard with proper Amiga keys and a proper Amiga logo.

It does cost a bit more than going the PC keyboard route, but doesn't your Amiga deserve it?

DISTRIBUTOR: Power Computing
PRICE: £39.95 (also available with Tower)
REQUIREMENTS: None

OVERALL VERDICT:
It is certainly much better than attaching anything with a Windows logo to your Amiga.

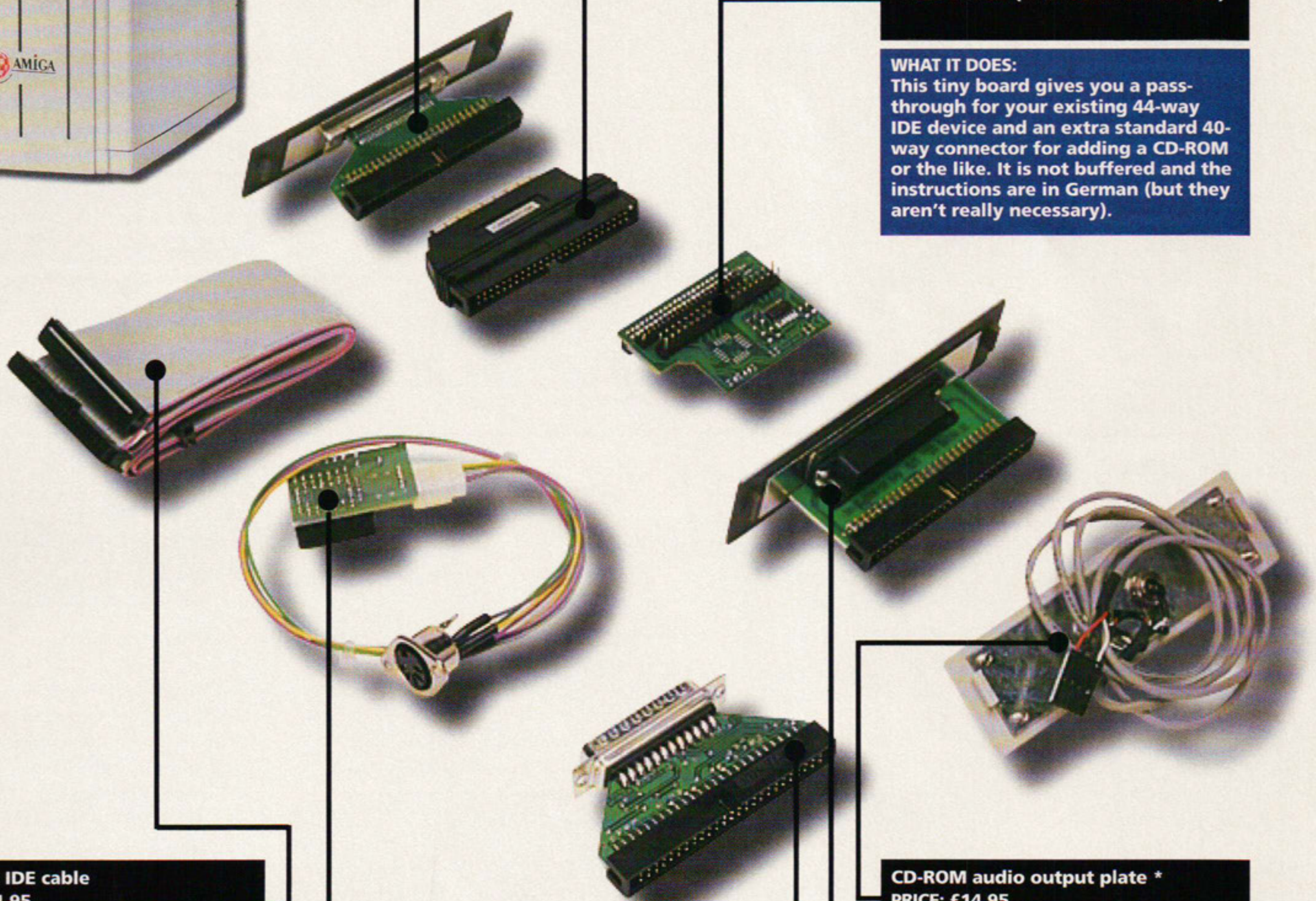
85%

MicroniK Bits and bobs

See these items at the World of Amiga show, May 16th & 17th, Hammersmith Novotel, London. Stand 111.



All these bits are available from Blittersoft, and while the parts marked with * are designed solely for use with the MicroniK tower, the others can be used for any other Amigas.



Internal SCSI to Micro-D SCSI II connector *
PRICE: £19.95

WHAT IT DOES:
This bit will be useful if you have some of the high density SCSI II external devices on your chain, such as the Mustek Scanner.

Internal SCSI I/II to internal SCSI III adaptor
PRICE: £19.95

WHAT IT DOES:
Very handy for converting your CyberStorm PPC SCSI cable for use with your existing SCSI peripherals.

IDE 4-way adaptor for A1200
PRICE: £19.95 (with software £29.95)

WHAT IT DOES:
This tiny board gives you a pass-through for your existing 44-way IDE device and an extra standard 40-way connector for adding a CD-ROM or the like. It is not buffered and the instructions are in German (but they aren't really necessary).

Adapting IDE cable
PRICE: £14.95

WHAT IT DOES:
This cable is designed for internal use (don't eat it!) and has two 44-way connectors on it and one 40-way connector.

Keyboard interface
PRICE: £39.95 including keyboard, from Power Computing

WHAT IT DOES:
This isn't actually a MicroniK device, it has sneaked its way onto this page by subterfuge. It's an interface for attaching a standard Amiga keyboard, er, just like the one on the opposite page.

Internal SCSI to external 25-way SCSI
PRICE: £19.95

WHAT IT DOES:
Designed for those with the Blizzard SCSI kit which has a 25-way external port on it. The cable attaching this to the Blizzard is too short for most towers so you can get one of these, some internal SCSI cable and the internal SCSI adaptor which is detailed in the box on the right.

CD-ROM audio output plate *
PRICE: £14.95

WHAT IT DOES:
This will connect to the back of your internal CD-ROM drive, but will still mean that you have two audio connections to hear sound from your A1200 and the CD.

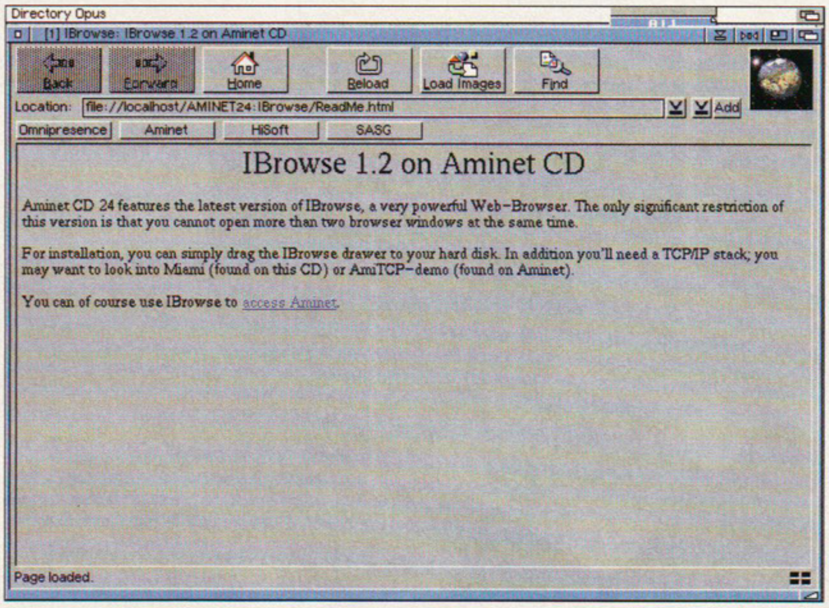
Internal SCSI to external 25-way SCSI adaptor *
PRICE: £19.95

WHAT IT DOES:
Gives you an external 25-way SCSI interface, ideal for use with an external Zip drive.

Aminet 24

See these items at the World of Amiga show, May 16th & 17th, Hammersmith Novotel, London. Stand 130.

The Aminet CDs have been around a lot longer than any other "magazine"-type CDs. Marking off the changes that Aminet has seen over the years, this new disc would represent four years of history if the early Aminet CDs stuck the the rigid two month schedule that they now follow. Even though an awful lot of people are now on the net and pooh-pooh the idea of getting their software from CD-ROM, it is only thanks to the Aminet CDs, Meeting Pearls and now our magazine's CD that you can keep track of how software changes over time. So while *Super Whizzy Edit v43.56* might not work on your machine, you can always look through the previous CDs to find an earlier version of it.



Get an only slightly restricted version of *IBrowse* with Aminet 24.

Most of the time that isn't possible on the net as new files replace older ones, so for that reason alone it's definitely still worthwhile holding a set of Aminet CD-ROMs just to act as an immutable archive of days gone by.

This CD has thousands of megabytes of new files on it (when uncompressed) and since it was created at the same time as the latest Aminet Set (see below) the files on it are marginally newer. The "freebie" with this disc is a special version of *IBrowse*, from which you can upgrade to the full version for a very reasonable price.

Unlike the normal Shareware version, the only limits applied to this one are that you can only have two browser windows open at once, which is hardly a big problem.

DISTRIBUTOR: Weird Science (0116) 246 3800
PRICE: £10.99
REQUIREMENTS: CD-ROM drive

OVERALL VERDICT:
Great stuff, but you get our CD free with *AF* every four weeks...

89%

Aminet Set 6

AMIGA GOLD FORMAT

See these items at the World of Amiga show, May 16th & 17th, Hammersmith Novotel, London. Stand 130.

For the completist out there, this set of four CD-ROMs not only represents very good value for money, a remarkable technical achievement and lots and lots of software, but also every single thing that's been on Aminet since the last set came out.

For those unfamiliar with the system, the four discs are divided into general categories, namely tools, gfx, fun and mods, so if you have some idea of what you are looking for, you don't have to search through all four CDs.

In addition, the familiar Aminet CD search facility is here and will prompt you for the correct CD to use for any particular file.

In addition to the huge quantities of material that Aminet generates for a four CD set, there are also four full commercial programs on the CDs, along with upgrade offers. The four titles are *Wordworth 5SE, Turbocalc 3.5, PPaint 6.4* and *Wildfire 3.38*. As well as this unique content there's apparently another gigabyte of previously unseen material that'll never appear on the regular Aminet CDs, although since I couldn't find out what exactly that consisted of, I can't say whether this is a good thing or a bad thing.



Get *PPaint 6.4, Wordworth 5SE, Turbocalc 3.5* and *Wildfire 3.38* with this set.

Overall, this Aminet Set, like all the ones before it, is superb value for money for those not on the net. For less than £30 you get four full software packages and all you could want from the Aminet.

If there's a fault to be found with either this or the standalone CDs, it is the escalation of offering full-price software as an incentive to buy them.

These CDs represent excellent value for money anyway, so extra incentives probably aren't required.

DISTRIBUTOR: Weird Science (0116) 246 3800
PRICE: £27.99
REQUIREMENTS: CD-ROM drive

OVERALL VERDICT:
Undoubtedly the best value for money out of all the CD collections.

91%

Deskjet 400L

Simon Goodwin reviews a cheap and versatile colour printer.

For most of this decade I've relied on an HP DeskJet 500 printer. After many thousands of pages it started to slip diagonally and bang its cartridge against the inner wall, before giving up with a barrage of flashing lights. It served me well, but as I needed to print some invoices, an upgrade was urgent.



Looks quite sleek, and it doesn't go 'thunk'.

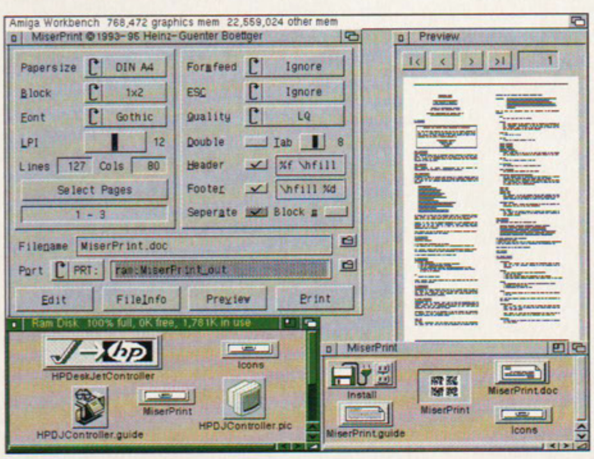
The DJ500 was bulky and limited to one ink colour at a maximum of 300 dots per inch. It made loud 'thunk' noises when reset, and my Amiga resets three times in rapid succession when starting, thanks to its *Fusion* and *OxyPatcher* reconfiguration.

> "The DJ400 doesn't thunk and it even powers down when the Amiga is turned off, saving electricity."

A tour of local PC stores revealed the DeskJet 400L – a compact colour printer, less than half the price of my DJ500 yet capable of twice the mono resolution. It could use my refilled and remixed DJ500 ink cartridges, accommodating the same mono and colour cartridges as DeskJet 5XX models.

The DJ400 doesn't thunk and it even powers down when the Amiga is turned off, saving electricity. You switch cartridges manually to go from mono to colour or vice versa, so it comes with a little grey case for the spare cartridge.

It's smaller than the 500, and the fold-out sheet feeder holds 50 rather than 100 pages, but otherwise the hardware seems to be just as good.



MiserPrint can pack up to eight pages onto a single sheet of A4.

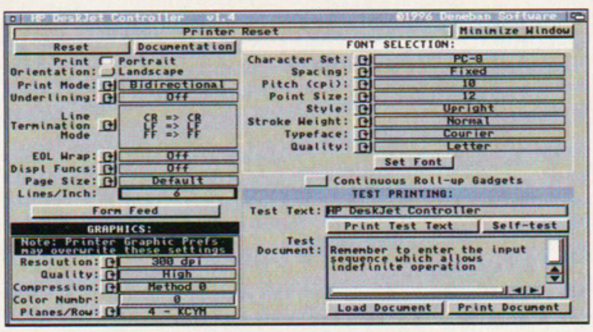
The printer cost only £115, with one colour ink cartridge. Replacement cartridges cost £15 to £20. Used ones can be refilled for a quarter of the price or less and work fine as long as you replenish them before they run dry, and temporarily tape over the breather hole at the bottom to prevent messy leakage.

DeskJets are reliable but expensive to run if you keep buying new cartridges. Mono ones print several hundred pages between refills, depending on the data; economy modes use less ink.

Colour cartridges deplete faster and are harder to refill – you must break the seal and then tape them up. Also, the magenta ink often runs out before the other two colours.

NO SUPPORT

One question remained – would it be Amiga compatible? Commodore's generic DeskJet driver is slow and stops after ten inches, which is OK for US Quarto paper but hopeless for European A4. My DJ500 used a PD driver from CIX, but would I find a colour equivalent?



Aminet has many Deskjet-related gems.

The DJ400 User's Guide was little help, just 20 English A5 pages without acknowledgement of the existence of any computers except IBM clones, or of operating systems other than Microsoft DOS or Windoze. Apparently HP only care about stereotypical business users.

Both UK phone numbers in the manual had closed for the week when I rang them at 5pm on Friday. The UK freephone fax support number was useless as it had a digit missing!

Years ago, HP offered token Amiga support. You could get a cut-down HP 'Studio' driver by faxing a number in the Netherlands, filling in a fax-back form and making a small payment in foreign currency. Lacking only a 'beware of the leopard' sign, it seems HP wanted to prove there was no demand from Amiga owners.

Even that has vanished now. HP's web page offers no Amiga information apart from file conversion to the omnipresent PC, no email printer support and no response to my complaint to the Webmaster about these deficiencies.

AMIGA SAVIOURS

If I was unfamiliar with Aminet and DeskJets, I'd have returned the printer by now. However, I have great DeskJet-specific programs like *HPDJcontrol* and *MiserPrint*, which packs up to eight A4 pages legibly onto one sheet. I'm familiar with HP printer language, PCL, and have written Qdos drivers. I'm also good at refilling ink cartridges, making DeskJets cheap to run.

My saviour was Peter Hutchison (pjhutch@blizzard.u-net.com), author of several Amiga HP drivers. Within days of my enquiry he'd posted a DJ400 driver on Aminet (text/print) and I was printing in full colour for the first time. Commercial drivers like *TurboPrint* and *Studio* give more options, but at £5 Shareware, Peter's driver is a bargain.

The DeskJet 400L is cheap, widely available and it works fine, given a proper driver. The hardware is great but the support for it really sucks. Hooray for Aminet!

DISTRIBUTOR: Hewlett Packard
PRICE: Approx. £150.
REQUIREMENTS: Any Amiga.

SPEED: ●●●●○
Fine, unless you need hundreds of pages at a time.

MANUAL: ●●●○○
Good on the mechanics, useless on the software.

ACCESSIBILITY: ●●●●○
Well-made, quick and quiet.

FEATURES: ●○○○○
No driver and no data from HP.

VALUE: ●●●●○
Great if you refill your ink cartridges.

OVERALL VERDICT:
Well designed, but no credit to the HP 'support'.

78%

Samplitude Opus

Simon N. Goodwin tests some serious sound software from ACT.

AFCD27:-In_the_Mag-/Under_the_Bonnet/Demo

ON THIS MONTH'S CD

CONTACTS

ALBRECHT COMPUTER TECHNIK
Seth 2 – 21769 Lamstedt, Germany.
Telephone: (00) 49-4773-8910-73
Fax: (00) 49-4773-8910-72
Mailing list: listserver@act-net.com
Web page: http://www.act-net.com

Samplitude Opus is published by ACT, makers of the Prelude Zorro II sound card. It's a major update of the original *Samplitude*, produced by SEK'D in Dresden back in the days when the A3000 was state of the art.

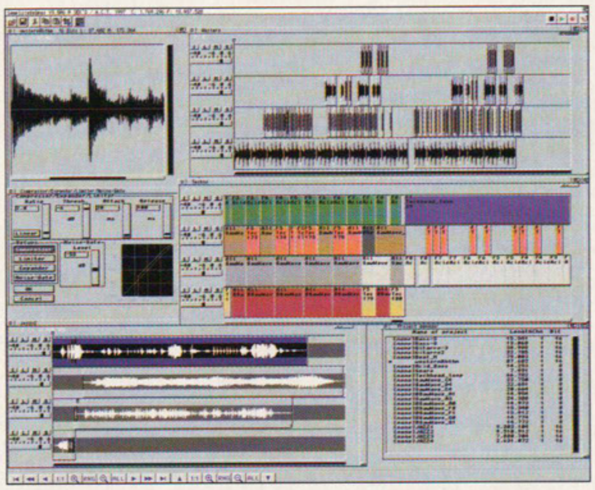
Samplitude is a broadcast-quality audio system with almost unlimited recording time, hard disk permitting. The update is capable of 16 track hard disk replay, mixing to MPEG, Audio CD or DAT quality stereo.

Opus comes on CD, with 68030, 68040 and 68060 versions, four multi-track demos and a scanty printed introduction, supplemented by a 115K AmigaGuide. It requires WB3 and an FPU and costs £140.

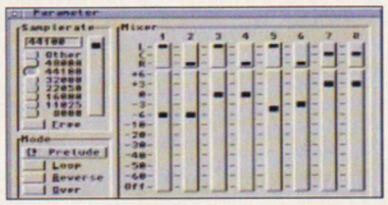
Samplitude is a high-end Amiga application – HiFi stereo channels consume 10Mb a minute, so gigabyte drives are no luxury. However, it is useful on any system from an A1200, accelerated with a hard disk and FPU, to a Cyberstorm. You do feel the benefit of faster drives and processors, CPU-board SCSI controllers and extra interfaces.

> *Samplitude supports three types of project: RAM and hard disk samples of any length, and Virtual Projects...*

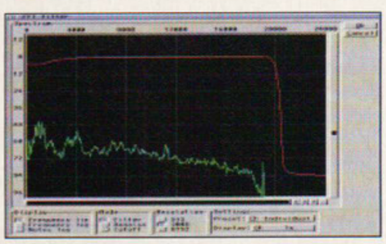
Eight-colour PAL is the practical minimum display, but the extra resolution of graphics cards helps a lot. ARexx is supported, and MIDI or SMPTE timecodes for video dubbing and complex productions. An external program syncs *Opus* up to any frame rate and offset.



Samplitude Opus **thrives on a high-resolution monitor.**



The Mixer Parameter window positions virtual tracks in the stereo field.



The filter window allows you to review and shape the frequencies in a sample.



The Fader applies linear or ear-friendly logarithmic fades, in or out.

Samplitude supports three types of project: RAM and hard disk samples of any length, and Virtual Projects, its greatest strength. These combinations of up to 16 'tracks' can be trimmed and positioned quickly and non-destructively.

RECORDING

Direct recording can be from humble eight-bit parallel-port samplers, vastly superior 16-bit Zorro 2 Prelude, Tocatta and Melody sound cards, or the Maestro Pro digital audio interface. Budget alternatives like Aura and Clarity can be used indirectly by recording with their 'standard' software, then importing samples; ACT promise to add drivers for co-operative hardware manufacturers.

Samplitude's own file format is raw 8- or 16-bit data with separate control files. You can import ready-digitised sound from audio CDs, MIDI samplers or compilations in a zillion formats. These range from crunchy old Amiga 8SVX via AIFF/AIFC, common on Amiga and Mac, through Microsoft's RIFF-off variant, to MacroSystems' mad MAUD. If you find a weird variation, try an off-line converter like Aminet's SOX.

Samplitude imports CD-quality audio from the Prelude DAT simulator at about twice real time on my Cyberstorm '060 Mark 2 with an IBM gigabyte HD and the default 30 buffers. The number of buffers you need depends on the file and partition block sizes.

The Amiga 'fast file system' is normally optimised for small files, rather than multi-megabyte samples. WB3.1 allows FFS partitions to be tuned for big files (see Hit The Buffers, *AF104*). ACT recommend 8K or 16K blocks. Adventurous users may consider alternative file systems. Direct sector access is also possible, on a standard format, removing file system overhead.

OUTPUT FORMATS

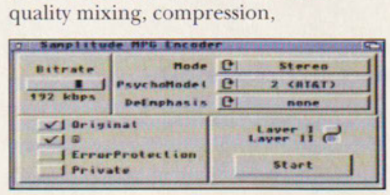
Besides computer formats like RIFF, AIFF/C and 8SVX (if you must!), *Opus* can dump raw or compressed audio. *MasterISO* and *MakeCD* can transfer mixes to CD, or you can record DATs via *Mestro Pro* or a suitable SCSI drive.

ADPCM is a simple semi-standard for audio compression. Log instead of linear samples give two to one compression with slight sonic impact. Some cards play this directly, halving Zorro overheads.

MPEG audio is impressively concise, but is strictly for finished work – if you try to mix or resample, gaps that are otherwise 'psychoacoustically masked' by compression become painfully apparent. *Samplitude*'s default 192-bit MPEG3 export level 2 takes about 10 times real time on a 68060. It multi-tasks, so you can still use your Amiga while it grinds away, crunching 44Mb to 6Mb in my test.

DSP

Rather than crunchy novelties like Dalek simulators, *Samplitude* concentrates on professional studio essentials: high quality mixing, compression,



The MPEG audio compressor is slow-running but very effective.



The Record window grabs stereo audio at any hardware-supported rate.



***Samplitude* can even share the Workbench screen, space permitting.**

equalisation and reverb. The filter and dynamic compression graphs are great, but there's no side-chain input for de-essing or ducking.

Reverberation, the simulation of real or imaginary room ambience, is vital to mixing and yet it is very subjective. How can *Samplitude* compete when DSP (Digital Signal Processor) fashions and stand-alone reverbs change with the seasons?

Samplitude's DSP routines work in step time – you can't twiddle as you play for instant results. This is a major drawback for interactive use, but it does ensure top quality. Even the most complex effects are guaranteed to work on a 68030 and 68882, while a 68040 or 68060 can do many operations on pre-recorded data *faster* than real time.

Operations give a continuously-updated 'time to go' display and it's fascinating to watch it revise estimates as you add or remove disk buffers from a Shell. *Opus* multi-tasks and it uses public screens. A DSP load display indicates the overhead of real-time replay. This is under 10% with Paula. It's more with Prelude, but still under 20%, playing from HD in stereo at CD rate on my Cyberstorm.

LEARNING

Most radically, *Samplitude*'s Reverb and Denoiser are capable of learning. The denoiser takes a sample of the unwanted hum or hiss and designs a filter to remove it with minimal effect on the remainder. The reverb is a sophisticated kind of room sampler. You record a sharp sound like a clap in the 'room', real or simulated, then let *Opus* work out the echoes and filtering.

This technique, known as convolution, can do some really awesome things, akin to vocoder sonic effects or graphical morphing. For example, you can even give guitars the pitch, echo and tonal characteristics of bongos, or vice versa...

Samplitude boasts accurate pitch shifting, time stretch and time compression. *Opus* does sample rate conversion the hard way, predicting the re-sampled wave from a succession of points, filtered to prevent distortion. This is vital for mixing of material from many sources, but it is extremely greedy for CPU power.

AHI and most 8-bit programs use decimation (throwing samples away) or linear interpolation (joining the dots). These are noisy techniques which work, after a fashion, but are unacceptable except for games or techno, where distortion and 'dirt' may be de rigueur!

CONTROLS

Installation is trivial – just copy the files, assign directories for your project types or click the MakeAssigns icon.

Samplitude requires the latest Prelude library, ignoring the card if v1 is installed. Instead, it favours an old V8 Tocatta library.

I tried *Opus* with AGA, Picasso 2, CyberGraphX and Picasso96 RTG. All worked but required the default pointer shape for consistency with *Samplitude*'s own 'help pointer'. If in doubt about compatibility, try the demo on our CD.

Configuration is crucial. You can adjust buffer sizes at any time, but the mailing list warns of crashes unless you set them in preferences or at the start of the session and then leave them.

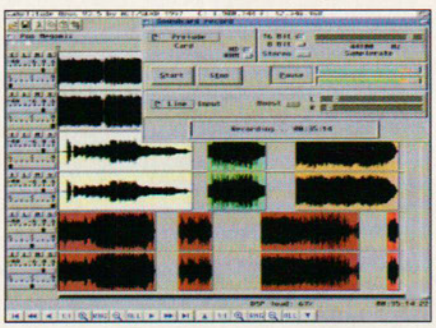
Short buffers smooth screen updates, at the risk of hiccups during heavy system activity. This could include screen swaps, window opening and the like. Picasso96 was the most reliable in this regard.

The user interface is fairly standard but takes some getting used to. Almost everything can be done with the mouse, but keyboard short-cuts are much quicker. Replay is continuous and tracks editing operations. You can open up to three windows on each wave, with vertical and horizontal zoom. This is great for start, end and loop setting.

Real-time sample selection works well by wiping the mouse across the wave, though you may end up with a very short selection if you wobble while pressing the button. This will give a disconcerting buzz until you hit stop or make a sensible selection.

Help is modal – you can't do things with the help on the screen, and DSP and Export operations stop you calling for help in the meantime.

Non-destructive editing and colour cues in a six track virtual project.



This is a general weakness of the original *Samplitude*, which ACT are still addressing. It's improving, but the controls are often temporarily ignored while the program is busy doing something else.

Samplitude tends to open information windows and immediately close them, as it works successively on short samples. This confirms that it is busy but it gives you no time to read the messages! I'd prefer to see scrolling lists rather than all that flicker.

SUPPORT

Samplitude is not perfect but the support is keen, especially via the Internet. ACT are based in Germany but the staff speak and write good English.

Many questions are answered through the mailing list, a moderated discussion group similar to Usenet news but targeted and spam-free. The *Samplitude* list delivers four or five emails in a typical day, though it's not busy every day.

The initial documentation was really feeble, just 12 loose pages of waffle, bereft of diagrams. However, this was soon supplemented by a useful tutorial. The AmigaGuide help remained incomplete and the buttons in some windows, like the MPEG audio quality controls, remain a mystery.

CONCLUSIONS

I'm sure ACT will improve the documentation, but it will be quite a while before all the bells and whistles are explained. Until then, the learning curve for *Samplitude Opus* will be steeper than it should be for such a system-friendly, albeit modal, program.

For the few English-speakers who used the original, *Samplitude Opus* is well worth the upgrade. Documentation aside, it's a much better product all round, especially with regard to the sound quality and stability. AF

DISTRIBUTOR: See contacts box.
PRICE: £140 including VAT and UK delivery. Upgrades £50-75.
REQUIREMENTS: CD-ROM drive, FPU and hard disk.

SOUND QUALITY: ●●●●●
No question – they got this right.

MANUAL: ●●○○○
Sells the program short, so far.

ACCESSIBILITY: ●●●○○
Initially daunting, neat but modal later.

FEATURES: ●●●●○
Lots of good stuff, few gimmicks.

VALUE: ●●●○○
The only choice for serious use.

OVERALL VERDICT:
Sorely-needed serious sound software, let down by the internal multitasking limits and poor docs.

77%

Long term Review

Drawstudio 2

Jamie Winter brushes up on his illustration skills with this excellent package.



My Amiga is mainly used for video titling as I'm not really into desktop publishing. Of course, I type the odd letter, but all that page-layout-drop-cap-fiddle-with-fonts nonsense doesn't apply to me, does it? At least that's what I thought until I used *DrawStudio 2*.

I registered for the Dean brothers' excellent *ImageStudio* package a couple of years back so I expected a clean interface, which I certainly got with *DrawStudio 2*. This comes courtesy of MUI so some will whinge, but once loaded, its simple interface almost begs you to create something.

The clear and concise manual describes *DS2* as an "illustration package" rather than a structured drawing package. I pitched straight in and had a go at a tutorial from a recent issue of *AF*. I was instantly impressed, finding it extremely easy to pull together fonts and graphics into a cohesive image. So how does it all work?

DS2 projects can comprise as many pages as you want. It stores all its graphic information internally in 24-bit colour, but the actual working screen can be set to operate in 24-bit colour, 8-bit colour, 8-bit greyscale or 1-bit black and white. You can switch between these modes at any time to balance view quality against speed and yet you never lose that top notch 24-bit image which hides under the bonnet.

Fonts are, of course, fundamental. *DS2* uses Adobe Type 1 fonts which are top quality and can be drawn at any size without those dreaded bitmap jaggies.



If you missed any of Larry Hickmott's superb *Drawstudio* tutorials, call our back issues hotline on 01458 271102 now!

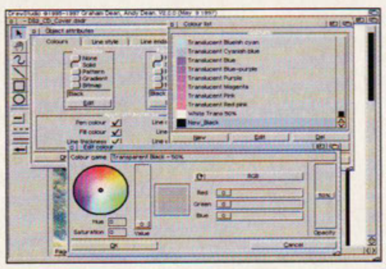
The text tool is stamped down on the page and edited just like in a word processor. Once you're happy, you can select your text and stretch it to any size, but you can also fill the text with a pattern, a gradient or a bitmap, giving you endless creative options.

Yet more options are available by converting your text object to a Bezier object. This allows you to add line weights to your text outline, or indeed further gradients, patterns or bitmaps. Cool stuff.



For picture buffs, *DS2* will import all the common graphic file formats and structured drawings in IFF-DR2D format. These can then be resized and moved freely around the page. The toolbar also allows you to create your own objects, using the drawing tools for lines, curves and boxes, etc. Again, the attributes for any of these objects can be freely adjusted.

"Software should enhance the productivity and the talent of the individual, which DS2 does admirably."



Drawstudio's powerful tools hide behind a very easy to use interface.

Normally only available in far more expensive graphics programs are layers. Layers operate like sheets of glass laid on top of one another. Select a layer and draw on it. Create another layer and you can draw on that too, in effect placing it over the top of your first layer.

If you get it wrong, just delete the duff layer and your original drawing is safe. *DS2* lets you rearrange and hide or "grey out" layers if you wish.

If all this doesn't satisfy you, or if you want to use combined effects regularly, *DS2* also gives you an excellently implemented ARexx port to write your own scripts. Just select the script from the window. Easy!

The manual gives useful hints on using ARexx in *DS2* so there's no excuse for not firing up your text editor. Printing is well supported, with direct support for *TurboPrint v4* or later, so you can ensure the best printed output currently available.

For us non-DTP types, images can be exported as bitmaps in all the usual file formats and in a variety of colour depths, DPI levels and pixel sizes.

So, where are the gripes? To be honest, I can't think of any. I'm not a great Amiga technician by any stretch of the imagination, I'm just a "user" who's wants effective results quickly.

Software should enhance the productivity and the talent of the individual, which *DS2* does admirably.

It is rare on any platform to find a program which provides powerful tools and yet avoids bogging you down in fussy and complicated interfaces. When this balance does occur, you can guarantee success. We all know about the *Lightwaves* and *Scalas* of this world – if *DrawStudio 2* isn't on a par with these programs, then it is very, very close.

If you're interested in graphics for any application then buy this now – you'd be mad not to.

YOUR REVIEWS

Have you got any software or hardware you couldn't live without? Got any that you'd happily chuck in the bin? Write a fair and accurate review of about 750 words and you could see your work appear in *AF*!

We will also need some good photographs of the hardware under review and a passport photo of you. Send your reviews to:

***Amiga Format* • Long Term Review • 30 Monmouth Street • Bath • Somerset • BA1 2BW**

BEN'S VERDICT

Although *DrawStudio 2* is a wonderful program, people have complained to me that they don't like the fact that it uses MUI for its interface. You'd be cutting your nose off to spite your face not to use *DrawStudio* on the basis of MUI, though.

It is one of the finest illustration tools I have ever used – on any platform. People interested in DTP, presentation graphics and web publishing really shouldn't be without it!

DRAWSTUDIO 2
DISTRIBUTOR: LH PUBLISHING (01908) 370230
Price: £39.95

OVERALL VERDICT:
An excellent program which, for me, really defines what modern Amiga use is all about.

94%

Shop Watch



In our mission to bring you the ultimate guide to the best places to buy Amiga products, we look at a selection of outlets from around the world.

Whether you live Down Under or in Kuala Lumpur, the sheer popularity of the Amiga means there'll be a store near you.

This is by no means a definitive list yet. We need you to send us details of your local store, and for your troubles you may just win a pile of Amiga goodies – so fill in that form now!

AUSTRALIA

Amiga Innovations, 111 Cambridge Street, West Leederville, WA, 6007. Tel +61 (08) 93881665, fax. +61 08 93812782.
Provides Amiga software and hardware support.

Computer Affair, 337 Penshurst Street, Willoughby North, 2068 NSW, Australia. Tel +61 29 4175155, fax +61 29 4175542

AUSTRIA

A.R.T. Computer Animation Ges.m.b.H, Feldstraße 13, 3300 Amstetten, Austria. Tel +43 7472 635660, fax +43 7472 635666, email info@art.at
An Austrian reseller for *Computer 3D and Video Solutions, DraCo* and *LightWave*. A complete Amiga price list and full mail-order service are available.

CANADA

RR#1 (Hwy 552 E), Goulais River, ON Canada, P0S 1E0. Cellular phone (705) 2560225, fax modem (705) 6491251 (use 9600 baud).

FRANCE

DeltaGraph'X, 13 cours Blaise Pascal, 91000 Evry. Tel/fax +33 0 160 871617.
Amiga reseller.

GERMANY

ADX Datentechnik, Haldesdorfer Str. 119, 22179 Hamburg. Tel 040 642 02656, fax 040 642 02659.
Amiga hardware and software reseller in Hamburg.

Softwarevertrieb Kanzmeier, Senator-Balcke-Str. 85, 28279 Bremen. Tel/fax 04 218 31682, email 01461.2277@compuserve.com

ITALY

Db-Line Srl, Via Alioli e Sassi, 19, 21026 Gavirate (VA), Italy. Tel 39 3327 49000, fax 39 3327 49090.

MALAYSIA

Click Grafics, Sdn Bhd, 123B Jalan Aminuddin Baki, Taman Tun Dr. Ismail, 60000, Kuala Lumpur, Malaysia. Tel 603 7178967/21, fax 603 7171962, email click@po.jaring.my
Amiga hardware and software dealer and graphics services provider in Kuala Lumpur.

THE NETHERLANDS

Barlage-Denhaag, Rabarberstraat 142a, 2563 RP Den Haag, Holland. Tel 070 448 0282, fax 070 448 0283, email barlage@mailbox.hol.nl
Hardware and software supplier.

PORTUGAL

Audiovisual, Rua Maria Matos, 6 – C/V Dta, 2675 Ramada, Portugal. Tel 351 1943264, fax 351 1930187, email info@audiovisual.net
Portugese dealer and distributor, promises best prices for hardware and software.

Centro Amiga, Avenida Almirante Reis, 113 – piso de baixo, Centro Comercial, Portugália, Loja 201, 1150 Lisboa, Portugal. Tel 3172942, fax 3172943, email centro.amiga@ip.pt

RUSSIAN FEDERATION

AmigaLine, Russia, Moscow, Zorge 6. Tel +7095 943 3941 or +7095 943 3871, fax +7095 198 9469, email ambartsumian@glas.apc.org
An Amiga-oriented computer shop located in Moscow.

SPAIN

Club Byte, C/D. Juan de Mena, 21 bajo Izq, 46008 Valencia. Tel/fax (96) 3921567.

SWITZERLAND

Applimatic SA, Rte-de-Montreux 49, CH-1618 Châtel-St-Denis, Switzerland. Tel +41 21 931431, fax +41 21 9314035.

UK

Bolan Computing, 37A High Street, Staple Hill, Bristol, BS16 5HD. Tel/fax 0117 9140047.
Sells Amiga hardware and software, as well as offering repairs and upgrades. There is a selection of software on the shelf ready to buy and a load of Amiga and Siamese systems on display as well.

USA

Commodore Computer Center, 4817 W. Emerald Street, Boise, ID 83706. Tel 208 342 3401, email ccc@interplus.net
Amiga dealer since 1988, with over 300 new and used software titles.

Compuquick Media Center, 3758 Town & Country Road, Columbus, OH 43213. Tel/fax 614 235 1180, email comquick@infinet.com

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Everyone who submits details of an Amiga store will be entered into our special competition with the chance to win some great prizes. More details on that later.
Send entries to Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW.



Workbench

AF's technical wizard John Kennedy pulls the answers to all your questions out of a pointy hat. Send your queries to: **Workbench • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW.**

MIX AND MATCH

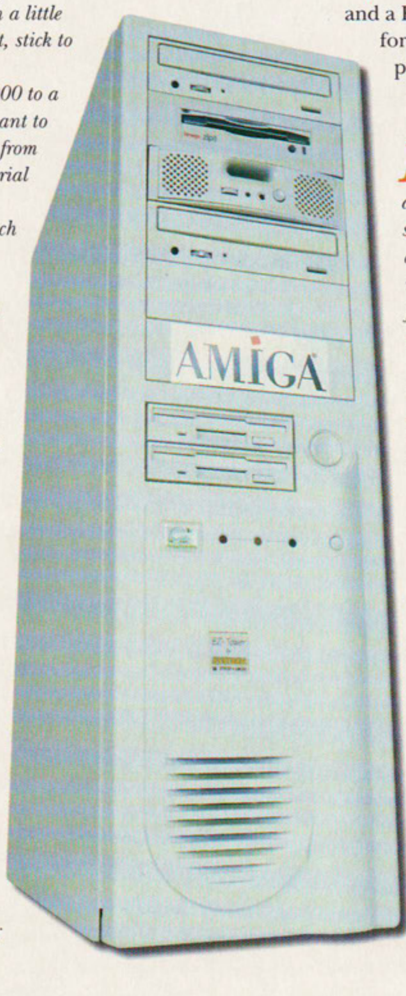
I have been interested in a tower for some time and now I have decided on a Power Tower from Power Computing. I would also like to put a PC in the tower and have the best of both worlds.

1. Can I do this with the Power Tower? I know it is possible with the EZ-Tower.
2. What would be the best way to connect my A1200 to the PC?
3. What would be the best sort of motherboard to use?
4. Can you get a switch to turn the A1200 off but still use the PC?

R. Heath
Colchester

1. *No. The Power Tower is designed to hold an A1200 motherboard only. You might be able to squeeze it in with a little DIY, but if DIY is what you want, stick to the Eyetech EZ-Tower system.*
2. *How you connect your A1200 to a PC depends on what you want to do. If you only want to copy files from one machine to another then a serial or parallel cable and a terminal emulator program running at each end will suffice. If you want proper networking, a pair of Ethernet cards would be required. If you want to share the display and drives then the Siamese system will do that for you.*
3. *The best kind of PC motherboard to squeeze into a tower case alongside an Amiga? It doesn't matter as they are very similar. If I was buying a PC motherboard now, I'd get one with an AGP port, Socket7 processor slot, USB connectors and plenty of SDRAM sockets.*
4. *Most definitely – don't think that it's possible to mix alien systems like the Amiga and PC into anything which isn't a pair of machines in the same box (although the Siamese is pretty clever, I admit). If you want closer integration then maybe you should consider using either a PC emulator on the Amiga or an Amiga emulator on a PC.*

Is it a PC? Is it an Amiga? No, it's Supertower!



TWO INTO ONE?

I have an A4000 and also a Dell P75 system. Having faithfully used an Amiga for the last 5 years, advancement at work has finally forced me to purchase a second hand Dell P75.

As you can imagine, my two desks are now rather full, so I'd like to know:

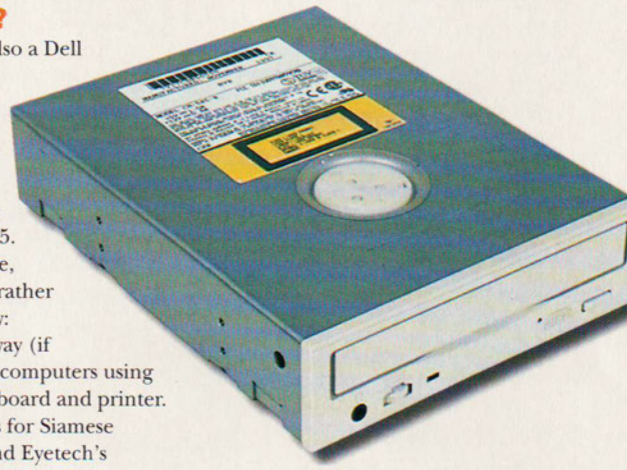
1. What is the best way (if possible) of both computers using the same monitor, keyboard and printer. I have seen the adverts for Siamese systems, Super Scan and Eyetech's EZPC-Tower.
2. As mentioned earlier, Eyetech have managed to place both an Amiga and a PC in the same box. Is it possible for this to be done with my two, preferably in a tower?

Kevin Pugh

1. *Perhaps the cheapest way would be to get an EZ-VGA scandoubler adaptor and a keyboard adaptor and switch box from Eyetech. This will allow you to use a single keyboard and monitor, and quickly switch back and forth between the PC and Amiga for all screen modes, including games.*

   As an alternative to the EZ-VGA adaptor, consider a graphics card for your A4000 as it will also speed up your Amiga considerably when used with serious software and it will work with the SVGA monitor.
2. *Most of the tower systems, including the Eyetech system, are designed for A1200 motherboards. The A4000 system is considerably larger and includes a daughterboard for the Zorro cards.*

   I think you should be happy to be saving space with having a single monitor, and stack the Dell and Amiga on top of one another.



IDE/ATAPI CD-ROMS are cheap and easy to fit, although you probably won't be able to find one as slow as double speed these days.

LAPTOP CASING

I have just upgraded from a 4 year old A600 to an A1200 with 170Mb hard disk drive and AmigaOS 3.1. I've got a few questions for you:

1. I'll hopefully be getting a dual-speed PC IDE CD-ROM and now that I have the 3.5" to 2.5" adaptor for it, will this be enough or will I need a buffered IDE interface? What software do you recommend?
2. I've heard that there is a laptop casing available for the A1200 and I want to put my A1200 in a laptop casing instead of a tower. Does this casing exist, where can I get it and how much would it be likely to cost?
3. I can't seem to get the lighting right on text and other objects on the *Imagine v2* coverdisk. Any tips? Maybe you could run a tutorial.
4. I'm having trouble with the EC command for Amiga E. I have all the requirements but it keeps on crashing. I've written to the author but got no response. Any ideas?
5. Can someone send me a copy of the latest version of MUI? I don't have Internet access and I've no idea where to get it.

Great magazine, great programs. If anyone is doing a course at college where there are only PCs then a little bit of information is that *Paint Shop Pro* supports IFF ILBM files and *Adobe Photoshop* exports HAM-6 (at least the version I used did).

Liam Reford
Port Glasgow

1. *The buffering isn't to do with speed, it's to protect the A1200's internal IDE interface. Unlike standard 3.5" drive IDE connections, the A1200's is unprotected to a large extent. If you connect cables which are too long, for example, you stand a good change of destroying some chips on the Amiga motherboard. So, yes, consider using a buffered interface. As for software, I use the ATAPI device software from Elaborate Bytes without any problems.*

2. *There are no laptop kits currently available for the A1200. At least, none that I know of and certainly none from any company that advertises. Some companies were making noises and displaying prototypes, but nothing happened .*

Perhaps new licensing agreements from the Amiga's new owners will make such a project more feasible in the future.

3. *Another* Imagine *tutorial? I seem to have spent 1995 to 1997 writing nothing else. "Not being able to get the lighting right" is a little vague. Try to limit yourself to one light source and adjust the ambient lighting levels to about 10.*

Move the light source around, and watch how it makes a difference where it's placed. Try moving it a long way away so it evenly illuminates the scene and then add a second light to highlight details.

4. *Sorry, I've never used Amiga E. I would suggest you get online and ask one of the many Amiga Usenet groups where this kind of problem is likely to be answered on an hourly basis.*

5. *You can find it on our CD every month, or you can contact your favourite Public Domain library who will be happy to send you a copy. Again, get online and you can download it yourself.*

SX-32 QUESTIONS

I have several questions:

1. I bought one of the first SX-32s, so consequently I have no FPU. Can I add one or is it a lost cause?

2. Can I add an A1200 expansion slot for accelerator cards, etc, to my SX-32, even if a certain bit of complicated DIY is needed?

3. What exactly is an ERROR 255 on a hard drive and how can I fix it?

4. Can I upgrade my 2x speed CD-ROM drive to a four speed or even an eight speed?

5. Since I got my SX-32 I can't get a lot of my old CD32 games to work properly. For example, *Oscar* has bad sound and the intro animations to *Roadkill* and *Syndicate* are not working correctly. Any ideas of how to fix this problem?

6. Whatever happened to *Inferno*, a groovy 3D game that was talked about a few years ago?

Alan MacPherson
Moray

1. ***If there is no socket on the SX-32 board for an FPU then there is no way to fit one.***

2. ***No. Well, you probably could but the DIY is so extensive that nobody has attempted it.***

3. ***Sorry, I can't any references to error 255. Even the AmigaDOS Fault command doesn't know about it.***

4. ***Not if you mean the CD-ROM drive present in the CD32. I've not heard of anyone attempting to perform this drastic surgery.***

5. ***Try running a degrader program to switch off the extra memory and processor options.***

6. ***I have absolutely no idea. Maybe you should try writing to games editor Andy Smith.***

A600 IS TOPS

I have an A1200 with 4Mb RAM but it is collecting dust in the garage as I need something small for Multimedia presentations. The A1200 is an excellent machine but as far as Multimedia goes the A600 is tops.

Also, as a matter of interest, our local TV station in Cork (Irish Multi Channel), which has over 300,000 viewers, uses Amigas for all its graphics and advertising. The Amiga really is here to stay – just ask Steven Spielberg, his company kept using Amigas in *The Lost World*.

Kevin Heffernan
Ballincollig, Eire



Hurrah for the A600! It's great...

I'd take issue with that and say that the A1200 is even better. It's faster, more expandable and offers a 16 million colour palette, compared to the 4096 colours available from the A600. Of course, both the A600 and A1200 are considerably more TV-friendly than a PC.

A4000 CRASHING

I have an A1200 and an A4000. Both have hard drives and extra RAM, but the main problem is the A4000. I have installed *Sim City 2000* on both machines and when I try to load the game from the A4000 the computer locks up and freezes. Pressing the keyboard or mouse has no effect.

The A4000 has a Goldstar 4x speed CD-ROM, SCSI 202Mb hard drive and 18Mb in total.

The same things happen to demos and even when playing games. It works fine for a few minutes and all of a sudden the Amiga crashes. The graphics jerk around and the sound output is badly distorted. I have removed the cover but I am afraid I might cause more damage. Please advise me in case I do something rash.

P.W. Soong
Birmingham



Big box – big problems? Not necessarily (see 'A4000 crashing').

Did the A4000 work properly before installing Sim City*? Does it work properly when using applications which aren't games or demos? A lot of programs, especially the hardware hitting demo programs, are not designed for the A4000 and simply won't work.*

They expect the processor to be a 68020 and don't expect the A4000's 68030 or higher. It could be that the programs which crash simply aren't A4000 compatible, and that's all there is to it.

If other more serious applications fail then I would be worried. Eliminate the software problems first. If possible, re-install a fresh Workbench and see if that helps.

Experiment with the hard disk's max transfer setting. Try using a degrader program to switch off the extra bits and pieces, then power down, take off the lid and check for faulty wiring, SIMMS not seated properly, badly fitted Zorro cards and a loose processor card. Before touching anything, make sure you aren't carrying a static electricity charge.

FISHING FOR ADVICE

A friend of mine has a small, exclusive, hand-made fishing rod manufacturing business. He heard I owned a computer and came to me wanting to know if it was possible to print a few A4 sheets of small, clear, sticky labels in white ink, which he currently has to write painstakingly by hand. I own an Amiga 1200 with an 8Mb expansion and 525Mb 2.5" hard disk (I have just bought an ICS Amigo tower and an 8 speed CD-ROM to install in it). What would you advise?

Also, is there a way I can use Show All Files or Shell to access Psion .Pic and .Wav files. I own Oliver Wagner's fantastic *Amiga/NCP* software but have not figured this one out yet. Please help! What programs would you recommend for this?

Bill Power
Portadown

You should be able to print out sheet after sheet of sticky labels using any colour inkjet printer connected to your Amiga. The only problem will be finding a combination of sticky labels and inkjet ink which are compatible. Failing that, any copy shop should be able to copy either hand-written or computer printed text onto a sheet of labels for you.

The problem is that PIC and WAV files are not native formats to the Amiga. In order for you to be able to use these files, you'll need a program to convert them into a more familiar standard, such as IFF. I'm afraid I don't know of any utilities which do this.

I'm tempted to say use AmiSox *or HiSoft's excellent* SoundProbe *software to*

Continued overleaf ➡

load the WAV files, but this might not work – just as an IFF file can contain many different types of data, so a WAV file can contain a multitude of compression systems and there is no guarantee that these are supported elsewhere. Sorry. Perhaps more Psion aware readers can write in with suggestions.



We covered deskjet printers in depth in our last issue.

Workbench

10 things to do when:

You want to link-up your Amiga

1. You can link up two Amigas to share files using only a null modem cable. Then you can use any terminal emulation software (including programs like *Ncomm*, *Term* or *Termite*) to send files using ZModem.

2. A null modem cable can also be used to link two Amigas together for some classic two-player fun, with titles such as *Stunt Car Racer* and *Lotus Turbo Challenge*.

3. If your Amigas aren't in the same location then you will have to use modems instead and let BT worry about the wiring details.

4. You can also link your Amiga to a PC or even an Apple Mac using the same approach – a null modem cable for systems which are only metres apart and a modem for greater distances.

5. You can do something more clever by running a free program called *ParNet*. This allows you to mount devices from a linked machine so you can use hard drives or CD-ROM drives on both computers, even if the drives are only connected to one Amiga.

6. *ParNet* works via the printer ports, which are much quicker than the serial ports. You will have to make up your own cable, however. If you can only find a null modem cable, you should use *SerNet* instead.

7. Two Amigas are better than one when rendering 3D animations. Use the same scene information on both systems but get one to render the even numbered frames and the other the odd frames. Copy the files onto the same system and convert into an anim. file.

8. Two Amigas sound better than one as well. A tracker like *Octamed* can synchronise two systems and so it can give you a true eight voices to play with. Use MIDI on each machine or a null modem cable.

9. Give an older system a new lease of life. For example, you could use *ParNet* to connect an A500 to an A1200. The A500 can access the files on the A1200's hard drive or even a CD-ROM drive if present.

10. Amiga networking doesn't stop there. With the right hardware (Ethernet cards) your Amiga can join in a network of Macs and PCs. In my office, an Amiga 4000 shares a LAN (local area network) with three other PCs, and any machine can access the files on any other.

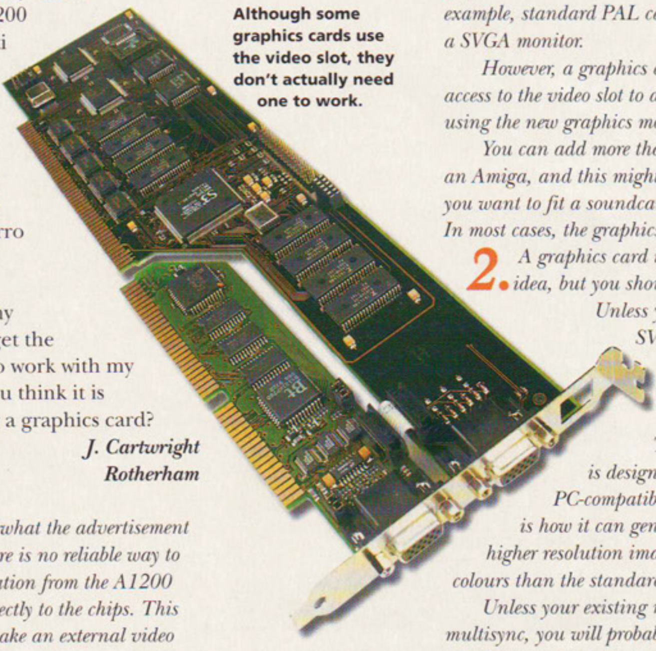
THE MARK OF ZORRO

I have a towered up A1200 with a 350Mb hard drive, 16 speed CD-ROM, Microvitec 14" monitor and Viper MK V 50MHz with 8Mb fast memory. I am about half way through my upgrade. I am now hoping to buy a Cybervision 64 3D graphics card for my next upgrade but I do not have any Zorro slots. This is what I want to know:

1. I was reading through the Eyetech advert and noticed a small section called "Graphics cards, scandoublers and the single Zorro slot solution". I read it and it basically said (I think) that the A1200 could not use multi Zorro slots and that a single Zorro slot is the best solution. Is this true? Also, would I need any more Zorro slots for future expansions?

2. Will I need any hardware to get the Cybervision card to work with my monitor and do you think it is worthwhile getting a graphics card?

J. Cartwright
Rotherham



Although some graphics cards use the video slot, they don't actually need one to work.

1. *No, this is not what the advertisement says. It says there is no reliable way to extract video information from the A1200 short of soldering directly to the chips. This means you cannot make an external video slot for the A1200.*

Remember that big box Amigas actually have two kinds of slot (ignoring the ISA PC bus slots), the Zorro II (or III) and a video slot. The video slot contains extra video information and is typically used by video cards which "scan double" the existing graphics modes. This means that, for example, standard PAL can be displayed on a SVGA monitor.

However, a graphics card doesn't need access to the video slot to display anything using the new graphics modes it provides.

You can add more than one Zorro slot to an Amiga, and this might be a good idea if you want to fit a soundcard or Ethernet card. In most cases, the graphics card is enough.

2. *A graphics card is always a good idea, but you should be careful. Unless your monitor is SVGA compatible, it will not work with the graphics card output.*

The graphics card is designed to output to a PC-compatible monitor, which is how it can generate sharper, higher resolution images with more colours than the standard Amiga's output.

Unless your existing monitor is a multisync, you will probably have to upgrade and buy a new monitor as well as a new graphics card.

CAN DOESN'T

I have just been given a second-hand A1200 with a hard drive and a CD player. I am having problems trying to load the *CanDo!* program onto the hard drive. When I run the program from the CD it loads up OK, but if I try to load it onto the hard drive then it loads up OK but won't reload after a reboot.

I get a message saying "Please insert vol Cando in any drive, could not find Cando library". I have also tried the Assign command in the Shell but just get a message "bad number".

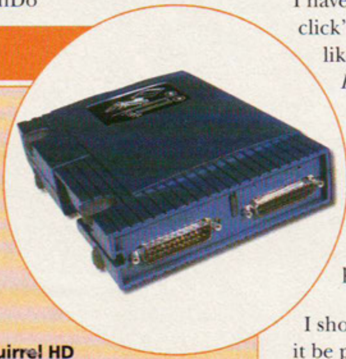
Can you tell me what I'm doing wrong and tell me in simple terms what I must do to keep it on Work all the time? Could you tell me where I can get instructions for *Cando v2.5?*

P.F. Longley
Stanmore

I didn't know CanDo! *was distributed on CD-ROM. Well, there you go – you learn something every day. You don't need to mess around with assign, all you have to do is copy the CanDo library into the libs: directory on your hard drive. Find it on the CD-ROM and copy it to libs:. I'm surprised that the Installation script doesn't do this for you – it's the kind of thing which I'd expect from illegal copies, not genuine software.*

CanDo documentation is almost impossible to find. If you didn't get the manuals with your version, I guess they must have been lost. The now departed Amiga Shopper *magazine ran a series on* CanDo *when it gave away the program – you could always advertise for second-hand issues.*

ZIPPITY DO DAH


Are you having problems with the Zip Plus?

Following your review of the Zip Plus drive in February's edition, I bought one. After getting a copy of HiSoft's *Zip/Jaz Tools* from First Computing, I can't install the drive. Having spoken to HiSoft tech support, it would appear that their tools disk is incompatible with the drive.

The only headway that I have managed to make is to use the Squirrel HD tools to prep the drive as a small hard drive. This means that I won't be able to use *Cross Dos* on it so that I can transfer files to a PC. Also, I cannot yet use it as there is an error with the rigid disk block on the Zip cartridges.

To top it all, my Workbench partition has a check sum error which *Quarterback* tools can't find. Help!

Barry Henderson

Yes, you're quite right. The HiSoft Zip Tools are out of date and don't support the Plus version of the Zip drive. My advice would be to visit Aminet and download some more up-to-date utilities. If you bought the Zip drive from the dealer after explaining that it was for an Amiga, and the dealer said it was compatible, then maybe you have a case for a refund.

Whilst looking on Aminet, I found the following from Michael Wheeler (wheelerm@teleport.com) and I reproduce it here with his consent:

"Oh no! You've connected your new Zip 100 Plus drive to your Amiga and *Squirrel Zip/Jaz Tools* doesn't recognise it as a valid Zip drive! What do you do? A bit of hex surgery is needed. If you have an Iomega Zip 100 Plus drive, you can make *Squirrel Zip* and *Jaz Tools* work with it by making minor changes in two files. I'll make it as simple as possible.

You will need a hex-editor or disk-zapper program. I use *AZAP.* First, write-protect and copy your *JazInstall* disk to a blank floppy. Don't modify the original install disk. Do all of your work on the copy. This way you won't lose the original files. Then, open your favourite disk-zapper or hex editor program and load the DoSCSIInquiry file.

You can search for the ASCII string IOMEGA. You should find a string that says "IOMEGA ZIP 100" followed by some spaces (hex character 20). At an address around 0x0154 you insert the word PLUS after ZIP 100. Leave a space after 100. The new string should read "IOMEGA ZIP 100 PLUS" (without the quotes). Save the modified file and exit.

We'll do the same kind of procedure with the file Squirrel JazTools, which is found in the Install directory. Open this file with your hex editor and search for IOMEGA. The first instance of this keyword is NOT the one we want, so keep searching. At an address around 0x00003954 you should find a string that reads "IOMEGA ZIP 100" just like above. (Using *AZAP,* the address is shown as follows: Addr: 0x00003800 Ofs: 0x154 Block: 000028).

The procedure is the same. After the words "ZIP 100" type in the word PLUS, so the new string should read "IOMEGA ZIP 100 PLUS"(without the quotes). Save the modified file and exit. That's it. Using the modified *JazInstall* disk, install the software to your computer. The modified software will recognise the Zip 100 Plus as a valid Zip drive and you're ready to go.

PLEASE NOTE: The modified software will no longer recognise a normal Zip drive! That's why you need to make a copy of the original install disk. DO NOT MODIFY THE ORIGINAL DISK!

This modification was posted with the permission of Oregon Research. Oregon Research advises that an official patch to *Squirrel Zip/Jaz Tools* is forthcoming."

A GREAT ADVENTURE

I have a great idea for a 'point and click' adventure game, which I would like to construct on my A1200, using *Real 3D* (*AF* coverdisk) for some of the graphics and a CD writer to create the master copy. I have no previous programming knowledge (other than HTML) but I can do some artwork on my Amiga and I would like to program the game in *Blitz Basic.*

Could you tell me which book I should buy as a beginner, and would it be possible to run a *Blitz Basic* tutorial on adventure games, with pointers on how to include Anim5, digitised video files (and similar files) in the games?

Also, could you tell me:

1. Is it possible to buy a graphics card for the A1200 or do you need to have a 'big box' Amiga, like an A4000?
2. If I used the ProGrab 24RT Plus to create animations or FMV sequences (from a camcorder or VCR) and saved them as Anim5 files, how would I be able to play these files within a game? Would I need a separate package and would I be able to run them from the CD-ROM?
3. Are there any programs which can make self-booting disks?

Christopher Hindley
Deeside

I eventually tracked down a book on Blitz Basic *called* The NRS Development Book for Blitz Basic. *You can obtain more information on this Canadian publication from their website, which is at* http://www.neather.com/Book.htm

You can order it for $39.95 + $15 shipping, or telephone (330) 945-9047 or fax them on (330) 928-1738.

There are many other Blitz *resources on the Internet, so try the online tutorial at* http://www.man.ac.uk/~mbge4cd1/Blitz/tutorial.html *too.*

1. *Not directly. Graphics cards require access to a Zorro slot and the A1200 doesn't have one. You can add one but it'll be £100 plus the cost of the graphics card.*
2. *Once your video clips are in ANIM5 format you can have all kinds of fun with them. There are many utilities in the Amiga public domain and Shareware libraries which let you spool animations from disk, so the answer is yes.*

Look out for BigAnim *and* Viewtek. SCALA *is great for replaying animations and is also surprisingly powerful when it comes to programming – you could quite easily create a simple point and click adventure program this way.*

3. *A self-booting floppy disk only requires you to use the INSTALL AmigaDOS command, then you can add your own lines to s:startup-sequence file. Self-booting CD-ROMS are possible too (or else CD^{32} games wouldn't work) but are slightly trickier.* AF

IF YOU HAVE A QUERY...

At *Amiga Format* we aim to answer as many questions as possible. Unlike some magazines, we don't just concentrate on our areas of expertise – we take on all your problems (as long as an Amiga is involved).


John Kennedy.

Here are a few tips on sending in questions:

- **Be concise.**
- **Detail the problem as best as you can.**
- **Describe the events that caused the problem.**
- **Give full details of your equipment.**
- **Make sure your question is relevant and wouldn't be more easily solved by contacting the dealer from whom you bought the goods.**

Bear these points in mind and fill in, photocopy, or copy the form below as best you can. Unfortunately we cannot reply personally.

Send your letters to Workbench, *Amiga Format*, 30 Monmouth Street, Bath, Avon BA1 2BW.

Your Amiga:

○ A500 ○ A500 Plus ○ A600
○ A1000 ○ A1200 ○ A1500
○ A2000 ○ A3000 ○ A4000

Kickstart version

○ 1.2 ○ 1.3 ○ 2.x ○ 3.x

Hard Disk: .... **Mb**

Manufacturer: ....

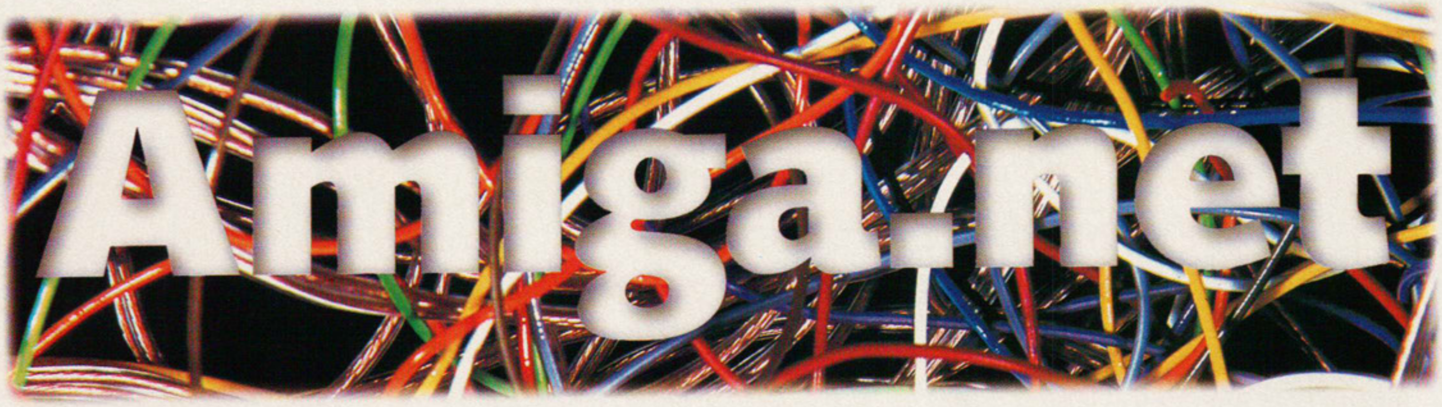
Extra RAM fitted – type, size, (Mb) and manufacturer:

....

....

Details of other hardware:

....



Amiga.net

Dave Cusick returns to ***Mirabilis' ICQ*** and finds out how plans to convert it to the Amiga are progressing.

CONTACT POINT

I can be reached with comments, suggestions and feedback at dave@dcus.demon.co.uk, or via my Web site at http://www.dcus.demon.co.uk/.

Back in *AF106,* Amiga.net focused on a brilliant piece of software called *ICQ*. This tremendously useful offering from Mirabilis lets you keep track of when your friends are online and lets you contact them directly, or leave messages for them if they're offline.

You can also launch conferencing software, initiate online gaming sessions, transfer URLs and files quickly and easily and so on. Unfortunately, you can currently only do this on a PC or Macintosh, or via a Java Virtual Machine. I was certainly not alone in lamenting the unavailability of *ICQ* for our favourite machine.

> *"This tremendously useful offering from Mirabilis lets you keep track of when your friends are online..."*

Indeed, something of a campaign for an Amiga version of *ICQ* had already been going on for some time. A chap called Brian Gilbert had contacted Mirabilis in mid-1997 to ask whether an Amiga port of *ICQ* was a possibility. He spoke to the exotically named duo Sefi Visiger and Yair Goldfinger, two of the three big guns at Mirabilis in Israel.

Brian said: "At the time I was expecting them to just brush me off, but to my surprise they informed me that they were both ex-Amiga users."

Yair wanted to know how much interest there would be in an Amiga version of the software, so to gauge this Brian set up the *AmigaICQ* page.

Visitors were invited to add their names to a list of those who would love to see a port. Brian posted the URL of his site in a few newsgroups and the response was so great that his server system administrator wanted him to take the site down.

"In late December I organised friends of mine to start coding the MUI and ClassAct GUIs for it to show Mirabilis that we could create a product that would be able to be used by someone that had previously only used the PC version without any difficulty," he said. Brian and three friends were prepared to code *AmigaICQ* at no cost to Mirabilis and all agreed to sign Non Disclosure Agreements regarding the *ICQ* protocol.

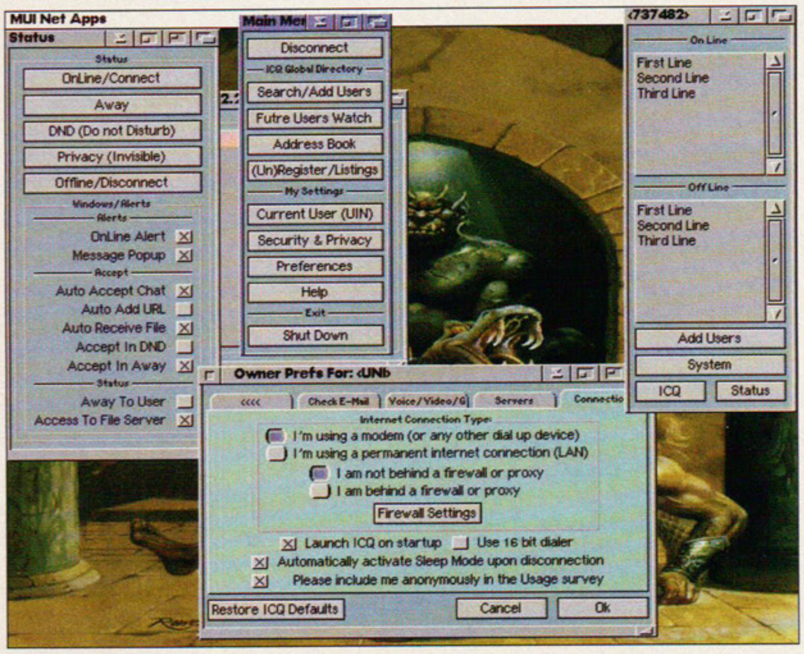
Unfortunately, since then things have ground to something of a halt. Yair expressed concerns about how the Amiga version would be supported, since the staff at Mirabilis are apparently not in a position to offer Amiga-specific advice. Brian offered to organise full Amiga support.

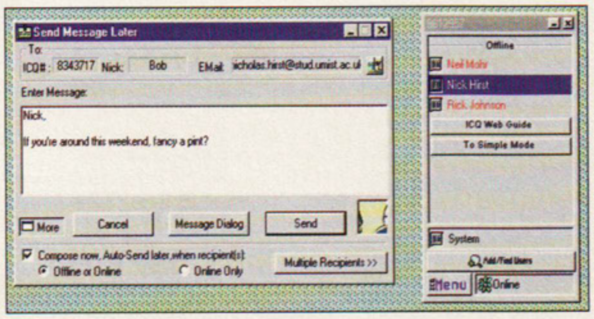
Given that Mirabilis themselves only offer email support, one would suppose that the *AmigaICQ* team would be able to offer at least the same amount of help to users. Brian even volunteered to create Web-based *AmigaICQ* instructions, as he works as a Web Publisher. However, Mirabilis were still uncertain, saying they were worried that if Brian and his friends handled program support for a while but then got fed up with it, Mirabilis might be lumbered with it after all.

Despite having been told to talk to the developers of the Mac 68K version of *ICQ* online, Brian has not been able to find them and he hasn't had any responses to his emails asking exactly what the situation now is.

Consequently, development of *AmigaICQ* has hit something of a brick wall because Brian and his team cannot go much further unless Mirabilis agree to provide them with information about

ICQ as it would appear on the Amiga...

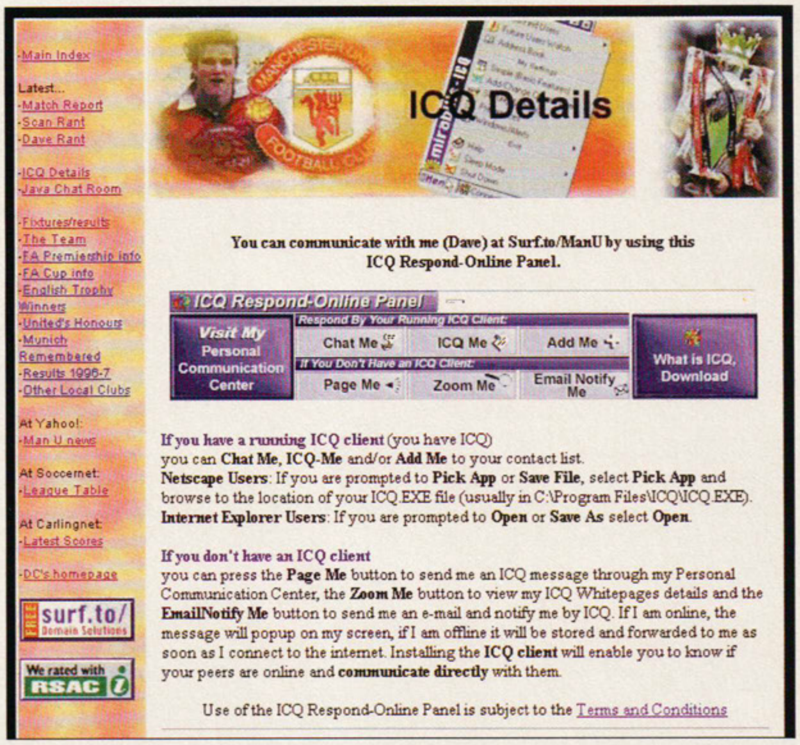




...and as it appears on my PC under Windows 95.



The Mirabilis Web pages feature an elaborate message-board system for use in conjunction with *ICQ*.



Web pages can be enhanced with *ICQ* contact panels so you can page the Webmaster directly.

the protocol their system and servers use. It looks as though Mirabilis have developed cold feet about *AmigaICQ*.

Brian said: "Mirabilis have always said that they would like to see an Amiga version, usually countering the statement with things such as they can't afford the manpower or they don't have anyone that would be able to do support for it… which essentially is untrue as I have addressed all of the facets of this."

He suspects the cause wasn't helped by a certain Mat Bettinson. Brian says that after Bettinson spoke to him about the *AmigaICQ* project, he went on to speak to Mirabilis directly and questioned the programming abilities of Brian's team, suggesting other programmers for the job.

Bettinson isn't the most popular of figures in some corners of the Amiga online community (take a look at the article at the NATW site and you'll see what I mean) and Brian's feeling is that he meddled with something he shouldn't have. For his part, however, Bettinson denies he ever questioned the ability of Brian's team, saying:

"I didn't say they couldn't do it, but I had a shortlist of three well-known authors who had actually written existing popular Shareware. I provided a kinda portfolio of what they'd done along with screenshots and stuff and sent this to Mirabilis. Their position was unchanged – they won't give someone the source to do a port, they want to do it in-house."

He lays the blame for the current impasse firmly at the feet of Mirabilis: "They asked me if I could think of some kinda solution and I said, 'Well, only by choosing one of the professional programmers who is more easily confinable under an NDA', but they never responded."

If Mirabilis were to start the ball rolling again, Brian says his coders estimate that an alpha version of *AmigaICQ* could be available within about two weeks, with the completed version arriving perhaps a month after that. With over 3,830 having added their names to the list of interested Amiga users on the *AmigaICQ* page, it's clear that there is a great demand for the software. That's not surprising, given the possibilities it presents.

> "Brian says his coders estimate that an alpha version of AmigaICQ could be available within a couple of weeks…"

What's more, since Mirabilis do not currently charge for the *ICQ* software on other platforms, and since Brian and his team are prepared to support a conversion themselves, Amiga users probably wouldn't have to pay a bean to use *AmigaICQ*.



This screenshot, again from the PC version of *ICQ*, illustrates how the program can help you keep up with your friends when you're online.

Brian recently received an email (on March 17th) from a chap called Daniel L. Stripes who had spoken with Gary Peake from Team Amiga, offering more support. Daniel said:

"Gary has successfully dealt with other companies who have given the same sort of treatment to the Amiga community that you are presently getting, and he has some ideas about how to get some co-operation from Mirabilis." Owing to differences of opinion, this hasn't lead to anything, but Finale Developments (of *ClassAct, New York* and *Voodoo* fame) have just agreed to try to help negotiate with Mirabilis to get hold of the protocol information – an arrangement both Brian and Finale Developments are quite excited about.

It seems that a lot of people want to see a fully functional *AmigaICQ*. If you're keen to be able to use *ICQ* on your machine, show your support for Brian's efforts by adding your name to his list of supporters. You can also email Mirabilis (info@mirabilis.com) and pester them to get things moving again.

In the meantime, you'll either have to run *ICQ* via a Macintosh emulator (or a Java Virtual Machine when one finally becomes available!) or else you'll have to make do with the capable, but system-specific, *QAmiTrack*.

SITES OF INTEREST

AmigaICQ page: http://www.mcmedia.com.au/amigaicq/index.html
Finale Development: http://www.finale-dev.com
Mirabilis: http://www.mirabilis.com
QAmiTrack: http://quamitrack.tibb.at/QAmiTrack.html
CU Amiga's Selectively Ignoring [erstwhile] Technical Editor:
http://thunderstorms.org/NATW/NewsOrganisationsEx2.html

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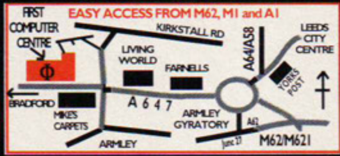
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CREATIVE

The indispensable guide to getting the most out of your software

New this month, enhancing our current series on graphics, I'm happy to introduce a brand new tutorial on creating icons for Workbench. Although everyone has to have them, a startling number of people don't know how they work or how to go about creating their own. If you are one of them, your prayers have been answered.

Of course, all our other tutorials continue apace, with Mr. Kennedy getting steadily more advanced in matters C, Mr. Goodwin working his way through your Amiga's hardware and myself tackling the tricky subject of diverse graphics file formats. If you have any ideas for things you want us to cover, write now!

Nick Veitch



SEND IT IN!

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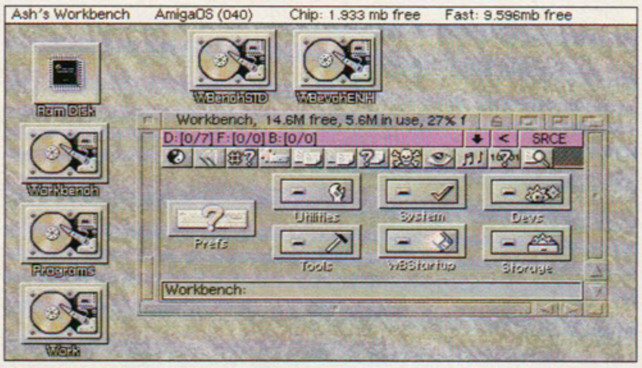
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NEW Tutorial



Oooh. Pretty. But how do you go about drawing attractive icons, what types are there and how do they work? Find out here.



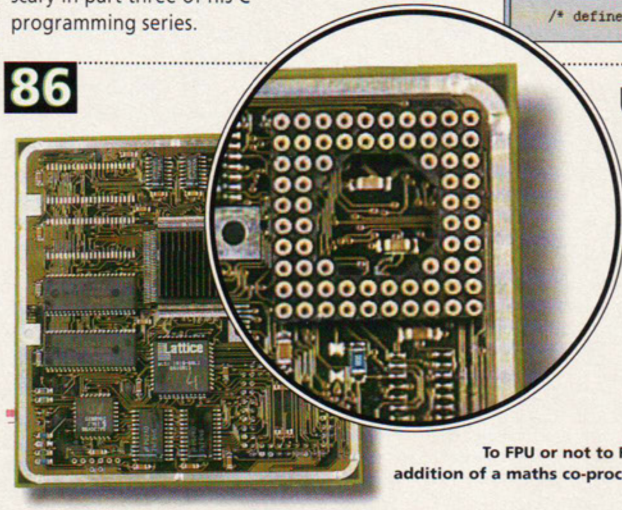


A fine example of a park in April, but will you be able to load it ?


```
/* Listing One */

main()
/* the main function, where everything starts */
{

    /* define some variables */
```

To FPU or not to FPU. Simon attempts to demystify the addition of a maths co-processor.

CHAPTER ONE

NEW Tutorial

Amiga Icons

In another brand new series, Ash Thomas begins an in-depth guide to using and creating icons for your Workbench.

There are many icon sets available for use on the Amiga and this reflects the configurability and versatility of the operating system. If you look on other systems, there tends to be one icon set and that is the one that came with it.

When Commodore provided the first Amiga operating system, two factors ensured that icons were going to be drawn and redrawn. Firstly, they provided an icon editor program so anybody could easily change or draw new icons, and secondly, the icons which came on the Workbench disk were so bad that many people decided they had to start drawing their own.

In this series of tutorials we will be looking at the different types of icons available for the Amiga, and the process of drawing an icon set. I will show you how to use different techniques to produce professional-looking icons and I will be looking at other ways to spruce up your desktop in order to complement these new icons – be prepared to have your Workbench extremely visually improved.

Contents

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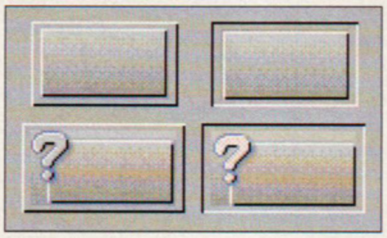
> Fonts and backgrounds are also included with the archive, making it a complete Workbench enhancer...

A KIND OF MAGIC

Magic Workbench first appeared in 1993 with a complete style of its own, including an eight-colour palette, default icons and button style. The drawer icons are all standard with a representation of what the drawer contains on the right hand side of the icon. The program icons don't have a default size, but the standard is a gradient background going from light at the top to dark at the bottom.

The author decided to draw his own button effect, which gives a quirky double border look that can be turned off with the right utility.

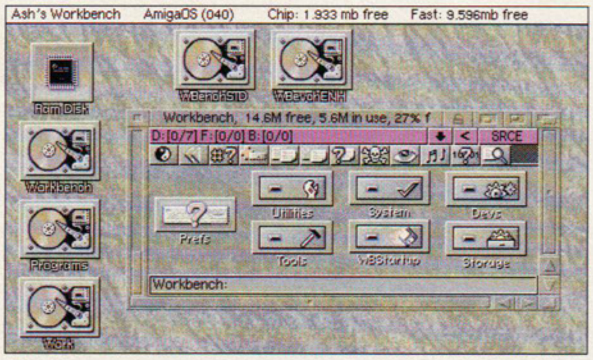
Magic Workbench also comes with some very useful programs. The provided demon looks after the palette so none of the colours get changed by any other program, although it occasionally provides a surprise when you boot the machine up.



These are template icons – the button style and gradient background can be seen on program and pref icons. The strongly dithered backdrop disguises the fact that only 3 extra colours have been used.

IconUpdate provides a quick and easy way to copy a *MWb* icon to another program. *MagicCopper* is a utility that allows you to have a rainbow-style copper effect as your backdrop.

Fonts and backgrounds are also included with the archive, making it a complete Workbench enhancer program. The fonts are of excellent quality and are complete so there are no missing characters. The backgrounds all follow the same eight-colour palette and some of them would put 256-colour patterns to shame. It is an excellent and well drawn icon set with its own set of standards and is certainly much better than Workbench's default icon set.



This shows *Magic Workbench* in its full glory with icons, backgrounds and fonts all running. The double border can be seen on the hard drive icons.

After the installation with the icons, backgrounds, fonts and copper effect running, it looks like a well designed system and will fool many people into thinking it is using a 64-colour screen.

It's a pity the icons don't follow a standard size – the drawers are all standard but the program icons differ. The standard drawer size allows them to be lined up with the clean up command, which looks much tidier.

If you have an A1200 with a multiscan monitor and a hard drive, it is ideal and will revolutionise your Workbench. If you have an Amiga 4000 (especially if you have a graphics board) then it is a pity it only uses eight colours. *MagicWorkbench* is Shareware and the author asks for £15, so if you like the test version, registration will enable you to view all selected icons.

SOMETHING NEW

If you have a more powerful Amiga with a graphics board, you may feel that the eight-colour icons provided by *Magic Workbench* are not using your Amiga to its full potential. Thankfully, there is a package which offers 256-colour icons.

NewIcons was released in 1993 after nearly a year of beta-testing. It is currently at version 4.1 and is written by Eric "RMerlin" Sauvageau, and comes with a collection of icons drawn by Phil "Aes" Vedovatti.

It ditches the standard Workbench icon handling routines and uses its own method of allocating colours. *NewIcons*

Interview With Martin Huttenlöher

AF: ***Why do you charge for* Magic Workbench?**

MH: I ask a small fee (compared to commercial software) to compensate for the work, time and effort, since *MagicWb* at that time was one of a kind.

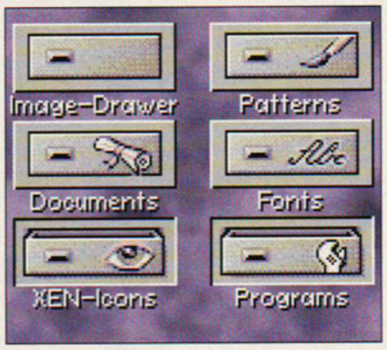
AF: ***What is your view on* NewIcons?**

MH: My subjective view? I don't really see *NI* as a competitor (recent polls showed *MagicWb* clearly ahead of *NI* in the public view, and this after so many years). I am not a defender of the ketchup'n'mustard toy-look of *NI*. I am a defender of a more "earthly" looking photorealistic art, of which *MagicWb* is the result and the best I could achieve with 8 colours. With 16 or 32 colours, I could achieve something different in style and class. More than that is just a waste of colours and bytes, since you won't need more colours than that on such a small space like icons to achieve everything your mind can dream of.

AF: ***Any plans for the future?***

MH: Yes – a *MagicWb 3* is likely to surface. I will decide when to strategically release any teasers for the next generation of *MagicWb* icons.

Martin would like people to register online. Email xen@sasg.com URL: http://www.sasg.com



A selection of the drawer icons which come with the package. The bottom two have been selected and the default drawer is shown so you can add your own image



A few of the best *MagicWorkbench* icons which use dithering to create the illusion of more colours.

works in the same way that backgrounds, pictures and most other Workbench colour handling works. The colours are allocated as and when they are needed. In this way, 256-colour icons can be drawn and used on 32-colour screens. When the operating system runs out of pens the colours become less accurate, but the effects are still impressive.



***NewIcons* with all 32 colours being used. The drawer icons contain the platforms, with orange being prefs and green being programs.**



The default drawer has a white platform, the other drawers have set colours. When selected, the drawer opens and the image moves upwards.

The icon artist doesn't have to worry about palettes or colour locking programs as it is all handled directly. A prefs program comes with the archive that allows you to control most aspects of the icon system.

Dithering is available if you are low on pens (and will be covered in a future tutorial), RTG Mode tries to make sure the icons go into fast RAM, saving you precious chip memory which is very useful if you have a graphics board. It allows you to turn off the borders on the icons so the raised look is removed and the transparency option makes colour 0 see-through. The full effect is very impressive as square icons become a thing of the past and you can draw your own button system. Other options are text outlining and shadowing, which changes the text under the icons. *NewIcons* comes with a complete set of 32-colour icons drawn by Phil and they are the best icons I have seen in 32 colours and will make jaws drop when seen in their full glory. They have a standard size of 36x40 which applies to all icons, programs, drawers, devices, etc.



These icons show how colourful *NewIcons* is – there is minimal dithering as it is not actually required.

They are drawn in an isometric style and have platforms underneath them, helping them to be identified easily, as different types of files have different coloured platforms. A shadow is also drawn on the platform which enhances the 3D effect.

NewIcons comes with many supporting programs that are required to help you draw your own icons. As it uses its own system, *IconEdit* cannot be used to draw the icons – they must be drawn with a bitmap editor and *InjectBrush* has to be used to convert the brushes into an icon. *CopyNewIcon*, *CreateDefaultIcon* and *KillNewIcon* are also provided because standard methods won't work with this system.

Interview With Eric Sauvageau

AF: ***Why aren't you charging for* NewIcons?**

ES: When Nicola turned it over to us, one of the conditions was that it remained free. We would end up with more hassle than profit as we would have to split the money between artists and programmers. So, none of us who did any work on it did it out of profit – we did it out of the need for something better.

Also, how do you cripple an icon system to encourage registering? By eliminating the alternate image like some other icon author did is kinda like selling a painting of which the background is missing. *NewIcons* itself has always been free and always will be free.

AF: ***Any plans for the future?***

ES: None at the moment. If there's any development that will be done, it's likely to be only done on the library itself. People are starting to switch to Workbench replacements and they all support *NewIcons* through its library. If the need or the inspiration comes for any update, I will return to it.

AF: ***Anything else about* NewIcons *you would like to comment on?***

ES: Just one thing. People often ask me if Amiga Inc. asked me about including *NewIcons* in OS 3.5. I would personally be disappointed if the OS would use a "workaround" such as *NewIcons* instead of designing a whole new icon format.

***NewIcons* has to do too many compromises in its actual form to be able to work as a patch over the OS. Anyone updating the OS will have access to all its inner core and so will be in a position to do something better, without those compromises. One such compromise we had to do was to put the image data as tooltypes. Another was to be stuck with 256 colours max, as the way *NI* works, a *NewIcon* is effectively converted in a regular icon by the patch so that Workbench can display it properly. If someone were to design a whole new icon format for a future OS revision, they could change the Workbench code itself to be able to display, say, 16 bits of chunky data directly onto the screen for gfx card users.**

Amiga Graphics

Filetypes to suit every need and occasion. Nick Veitch explains the pros and cons of them all.

Thanks to the people at Electronic Arts, and indeed Commodore, the Amiga has been a safe haven from different file formats. The IFF (Interchange File Format) was designed by EA in the infancy of the Amiga, and has been frequently added to and improved on to provide a common standard to suit all types of images and graphics usage.

The beauty of the system is that software only needs to be written to save and load one type of graphics file. Since the data in the file is tagged in blocks, software which doesn't need or support certain types of data (e.g. alphachannel data) can just ignore it and still load the parts of the image it does understand.

Unfortunately, the rest of the world is not so enlightened, and since we do have to deal occasionally with owners of different computers, you may have to deal with some of these formats.



One of these pictures is a 2.5Mb TIFF file, the other one is a JPEG which takes up 45K. You may notice a very slight degradation of image quality, but if I hadn't told you, you wouldn't know...



In the wider world, it seems that computer users pick particular file formats for particular jobs. Tag Interchange File Format (TIFF) images, for example, are big and bulky, but can contain lots of useful information (such as dpi values) which make it invaluable for the publishing world. The GIF file format, popularised by Compuserve, is restrictive but widely recognised, and has become a de facto standard for web graphics.

In the huge table is a list of some of the file formats you are most likely to come across, what they were designed for and information about the type of data to be found in them.

COMPRESSION

As with file formats, different types of compression suit different purposes. For example, JPEG images are used heavily on the Internet because, although you have to pay a high cost in terms of processor time to decode them, this is insignificant compared to the time saved in transferring them over relatively slow network links.

Equally, easily decodeable compression techniques (or even none at all) are required when dealing with images which have to be streamed rapidly, e.g. for animation. That's one reason why some dithering methods are inadvisable for images to be used in animation.

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THE A TO Z OF COMMON

IMAGE FORMAT	COMMON EXT'S	BIT DEPT
Interleaved Bitmap	.IFF,.ilbm	1-24
PCX	.PCX	1-24
Windows Bitmap	.BMP	1-24
Graphics Interchange Format	.gif	1-8
PIX	.pix	8(grey),2
Sun Rasterfile	.ras	1-24
TIFF	.tif, .tiff	1-24
RGBA	.rgb, .rgba	1-24
JPEG	.jpeg, .jpg	24
TARGA	.tga, .trga	16,24
PNG	.png	1-24
EPSF	.eps, .epsf	1-24
DCX	.fax, .dcx	1-24
IMG	.img	1-8
PICT	.pict	1-16
Photoshop	.8bim, aps	1-24

For example, say you have 200 frames of 24-bit video capture which you want to turn into an animation. You realise that in order to playback normally you are going to have to reduce the bandwidth a bit. This is normally done by reducing the size of the image and probably the bit depth.

Random dithering types like Floyd Steinberg give the best range of shades and tones in a colour reduced image,

> **The beauty of the system is that software only needs to be written to save and load one type of graphics file.**

but they also play havok with the compression modes used in most IFF ANIM formats. Ordered dither modes are much less disruptive.

One of the simplest forms of compression is called Run Length Encoding (RLE) and it is used extensively on the Amiga and in many other common image file formats.

RLE takes advantage of the fact that, particularly in computer generated or painted images, large amounts of the image are blocks of the same colour.

Scanning the image line by line, it reduces particular sequences to two values – a run length and a colour value. So if you can imagine the first line of an image being something like: RRRRRRRRRRRRRRRYYYYYGGGGGGG (where R, Y, and G indicate different colours) this could be compressed to 15R5Y9G, which is a considerable saving of space. RLE encoding works best on images with 256 colours or less, and is not really suitable for 24-bit images as there there are more instances of unique colours.

Related to the RLE method of encoding is LZW encoding. This is more complicated, but in simple terms it just checks for patterns in the data, and in this respect it is more suited to 8-bit images, although it is commonly used in some 24-bit formats.

JPEG has become the favoured way of compressing truecolour images. It is an interesting compression method because it is one of the few widely-used "lossy" compression systems. This means that the integrity of the file is not maintained when JPEG compression is used – the resulting file has lost quality.

This is generally overlooked in the case of JPEG files, because the image has usually lost detail in fairly unimportant areas. JPEG files make use of the way in which the human eye sees colour and tone to remove detail from parts of the image where the eye will least notice it.

Using a system of discrete cosine transforms, the image is then mathematically compressed.

The amount of detail lost can be adjusted by the "quality" value given when saving a JPEG file, which also effects the size of the resulting file.

JPEGS are ideal for web graphics, multimedia and other areas where truecolour images are required but file sizes must be kept to a minimum.

Because the compression techniques used are based on truecolour (24-bit) images, it is not suitable for use with "standard" computer graphics (for example, 8-bit or less)

CONVERSION

You may often find it necessary to convert foreign images to IFF format for use in other programs. Fortunately, programs such as *ImageFX, Photogenics* and even the ageing *ADPro* support a wide range of these foreign formats.

Datatypes, used under WB3, can also help with software that supports them. The PD utility *Viewtek* can be easily used to convert any image you have a datatype for to a jpeg, simply by specifying a save filename.

It is just as important to save your files in a way that allows other users to access them. Although there is support for the IFF format on the Mac and PC, it is often far from complete (for example, HAM images are seldom supported), so converting images into a more general format such as TIFF or JPEG is probably a wise move.

IMAGE FILE FORMATS...

COMPRESSION	COMMON PLATFORM	USAGE	COMMENTS
None, RLE	Amiga	General Amiga usage	When EA and Commodore came up with this, they saved Amiga users hours of frustration.
None	PC	Screen capture	Effectively, the PCX format is a dump of the graphics memory of a PC, hence there tend to be many variants and compatibility is a problem.
None,RLE	Windows PC	Common PC usage	An attempt to provide a device independent image format for the PC platform, not universal but well supported in PC applications.
LZW	Universal	Web graphics	Subject of controversial copyright claims, the GIF format may be eventually pushed out in favour of PNG or another global format.
RLE	SGI Alias/Wavefront	Rendered graphics	Generated virtually exclusively by the Silicon Graphics platform, it is nevertheless supported by a number of conversion tools.
None	Sun	Various	A reasonably obscure and outdated format, but one still common on the Sun platform.
None, LZW, RLE	Mac, PC	Publishing, various	TIFF was the first 24-bit file format to be supported by *Quark Xpress*, and is still heavily used in publishing and image scanning.
None,RLE	SGI	Rendered graphics	More popular than the PIX format, widely used for images rendered on the SGI platform.
JPEG	Universal	Truecolour graphics	The work of the Joint Photographic Experts Group, this is the universal format for compressed 24-bit images.
None, RLE	PC	Hi and truecolour graphics	The standard truecolour picture format on the PC for many years, it is bulky and losing favour in the modern world.
Various	Universal	Web graphics	Designed as a non-contentious replacement for GIFs, this format has yet to gain in popularity, in spite of its many advantages.
None	Universal	Publishing	This format is used for encoding images as *Postscript* documents, making them much easier (and more reliable) for DTP work.
Various	Universal	Fax documents	This format is the universal standard for encoded fax documents and is very closely related to the Targa image format.
RLE	Atari, GEM	Atari graphics	The once popular Gem image format was mainly used by the Atari and is no longer in common use.
RLE	Mac	Mac graphics	The PICT is the OS standard graphic file for the Macintosh and is still heavily used on this platform, but rarely elsewhere.
Various	Mac, PC	Publishing	The *Photoshop* format includes support for layers and extra channels. It is widely used for graphic design and publishing.

C for Yourself

Look after your data and your data will look after you, says **John Kennedy** in part three of his tutorial.

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Missed a tutorial in this series? Call our back issue hotline on 01458 271102 or see page 53.

C is much more than just a high-level version of assembly language. Yes, the commands it has are simple, but there are many hidden depths. All larger programs soon need to store information and this requires a little thought and planning. I don't necessarily mean the data stored on disk, but data used by the program.

For example, a program which saves a picture in IFF format needs a data structure to store the picture information, even before it can be written to disk.

This is one thing which C is good at. It allows you to define your own type of variables and combine them to make data structures. Spending time in advance, planning the way you store data, is often more important than the program itself – look after your data and the program will almost write itself around it.

> "Spending time in advance, planning the way you store data, is often more important than the program itself."

ARRAYS AND STRUCTURES

We saw last month how to store values in variables. We define in advance the type of values we want to store, give the name of the variable and from then on we can use it to store information. For example, we would create a variable to store an age like this:

```
int age;
```

However, how would you go about storing two ages? The obvious answer is to use two variables, like this:

```
int age1,age2;
```

This creates two separate integer variables which we can deal with independently of each other. For two ages, this is as good a way as any of storing the information. It gets trickier when we try to store a hundred or a thousand ages though.

You could spend a lot of time simply typing variable names. For this reason, C provides us with arrays.

Arrays are variables which can store multiple values, and you provide a number to act as an index to the individual values. Here's how to declare an array which can store 1000 ages:

```
int age[1000];
```

This reserves space for a thousand integer variables. We can access the individual values like this:

```
age[10]=10; if (age[21]==10)
printf("21!");
```

and so on. There several things to note about arrays. First of all, you can't assume they have an initial value. Like variables, it's wrong to assume they are zero to start with.

Secondly, array elements aren't numbered from one to 1000 as you might expect. Instead, they start at 0. The above example would therefore have age[999] as its last element.

You don't have to specify the element by a number every time you want to use it – you can use another variable. Here we'll introduce the for() C word, which creates a loop which counts through different values. We'll use it to set all the elements in the age array to a single value.

```
int age[1000]; int i;

for (i=0;i<1000;i++) age[i]=0;
```

The for() loop has three parts inside the round brackets: an initialisation part (where we set the variable we are using as a counter to zero), a condition (which must be true otherwise the loop ends) and an incremental part (which adds one to the variable i).

We don't need any curly brackets around the age[i]=0; instruction because the for() command knows that it only acts upon a single block of code. In this example, we use curly brackets to define our own single block of code:

```
int age[1000]; int i,a;

for (i=0;i<1000;i++) { a=21;
age[i]=a; }
```

As we have two instructions that we want to be inside the loop, we need to enclose them in brackets.

Now for structures. Structures allow you to define your own variables which contain different types of data. They look kind of confusing at first, but they actually simplify your programs a great deal because they "package" up variables and so help you keep track.

Here's an example. Let's say we need to store three items of information: a name, an address and an age. We'll define our own structure to store the information, like this:

```
struct our_data_type { char
name[20]; char address[30]; int
age; };
```

This looks scary but it has only told the C compiler that we want to make some variables which contain three different things. You can see that it's allowed to have arrays inside a structure, and we use an array of characters to store both the name and address.

The C code above doesn't actually contain any program as such. It doesn't define any variables by itself, it only describes a new type of variable to the

compiler. If we want to make use of the new type, we have to declare a new variable like this:

```
struct our_data_type person1;
```

This has created a new variable called "person1", and this variable happens to have a name, address and age associated with it. To access these parts, we use a special syntax involving a full-stop. Here's how to access the age:

```
person1.age=42;
```

As you might have guessed, it's possible to have arrays of structures (phew!) in which case you'd define them like this:

```
struct our_data_type
persons[1000];
```

This creates a thousand new variables, and again, we can access them via the index and even inside a loop, like this:

```
int i;

for (i=10;i<20;i++) { if
(persons[i].age>30) printf("This
person (number %d) is old!\n",i);
if (persons[i].age<0)
printf("This person is minus! An
error!\n"); }
```

POINTERS AND MEMORY

OK, time to come clean. C can be difficult to use, and yes, it does offer some features which seem to totter on the brink of madness. Pointers are a good example of this kind of feature.

You might wonder what kind of madman designed a language which allows you to poke around directly in your computer's memory space, with all the dangers of system crashes and other bizarre happenings.

At first, Pointers do seem a little excessive and they are certainly confusing but it's not take long before you realise the power they give your program. Some languages can seem a little tame and can hamper you but C is not like that. It is a language of extremes as you can define high-level data structures one minute and toggle an individual binary bit in raw RAM the next. Frightened yet? Good, because Pointers aren't for the faint of heart.

Here's how they work. By now you should be happy with the idea of a variable storing a value for you. You should also know that variables need to be given a type so that the compiler knows what kinds of information they store and how much memory to set aside for each one.

It stands to reason that every variable must exist in memory somewhere, although ordinarily you don't need to know or indeed care about that. That's where the Pointer comes in. A Pointer is a special variable which is designed to store the memory location of a variable. It doesn't store the name or the contents of the variable, only the memory address which contains it. Here's an example:

```
int i; int *p;
```

This has defined two variables. The first is an integer, as usual. The second has an asterisk in front of it which makes it a Pointer to an integer variable. It doesn't store integers itself, it stores a memory address. If it doesn't store an integer, why the "int" type in front of it?

Well, the C compiler needs to know what type of variable the Pointer points to so it can perform certain actions with it later on, if required.

> There are several things to note about arrays. First of all, you can't assume they have an initial value.

Now let's give the Pointer something to store:

```
i=42; p=&i;
```

The variable "p" doesn't contain 42. It contains a number which is impossible to predict as it's the memory location of "i". The ampersand symbol stands for "the address of".

Try a program like this for yourself:

```
include "stdio.h"

main() { int i; int p;

i=42; p=&i;

printf("The variable i contains
%d\n",i); printf("And exists at
%d in memory.\n",p); }
```

Now that p contains the address of i, you can use it to change the contents of i. However, you can't do it with an instruction like this:

```
p=96;
```

as that would merely change the memory address which is stored in p. Instead, you will need to us that asterisk again, and you'll need to use an instruction like this:

```
*p=96;
```

which you can read as "the contents of p is set to 96". Try adding this line to your program above and watching what happens. The Pointer variable p will remain at whatever address it was initially set to, but the value in i will change to 96.

Next month we'll see how pointers and structures are used extensively in AmigaDOS, when we eventually get around to writing a C program which actually makes use of Intuition rather than the Shell.

Functions and Pointers

So are Pointers useful or merely scary? The answer is "very useful" and here is only one example to prove it. We've already looked at using C functions and you might know they return a single value. Here's a simple function which accepts two numbers and returns their sum:

```
int AddUp (int a,int b) { return (a+b); }
```

The value (in this case, a sum) after the return keyword is returned to the line that calls the function. Functions are terrific for this, but how do you return more than one value? You can't – you can only return a single value from a function.

Pointers let you get around this. Instead of passing two numbers into the function, pass two Pointers to two variables. You can change the contents of the variables and so return as many values as you like. Here's an example program which swaps the contents of two variables. Try re-writing this without Pointers and see what happens.

```
#include "stdio.h"

void swap(int *a, int *b) { int c; c=*a; *a=*b; *b=c; }

main() { int x,y;

x=10; y=20;

printf("X is %d and Y is %d\n",x,y);

swap(&x,&y);

printf("X is %d and Y is %d\n",x,y); }
```

Now I'm not saying the above program is particularly easy to understand, but if you work through it then you should be able to grasp what is happening. If you need help, email help@sticky.net and I'll explain it in more detail.

Under the Bonnet



Float away with **Simon Goodwin** as he explains mathematical optimisation.

AFCD27:-In_the_mag-/Under_the_bonnet/



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This month we delve under the bonnet of floating point arithmetic, where a modern Amiga can outperform the original by a factor of 500 times or more, yet a top-notch 68030 system might outrun a 68060! But it's not that simple...

Basic microprocessors only process whole numbers, known as integers. Fractions and extreme values require floating-point maths. Floating Point Units (FPUs) handle these directly.

Floating point formats are useful for simple arithmetic – addition, subtraction, multiplication and division, vital for rendering and spreadsheets – and rarer 'transcendental' functions like tangents and logarithms.

> *From the 68040 onwards, Motorola made the FPU an option on the main chip. It's much faster at arithmetic...*

FPUs are a popular upgrade. The chart summarises Amiga FPU hardware and software options. The tips at the bottom of each column will require some hardware know-how.

Motorola reserved 4096 instruction-codes for floating point arithmetic, but these were initially unimplemented. You can add an FPU to a 68000 or 68010, but this requires extra code to trap unimplemented instructions and exchange values with the FPU. That's how the Mac utility SoftFPU supports FPU instructions, very slowly, on systems lacking FPU hardware.

From the 68020 onwards, a co-processor interface made this automatic, with the main CPU accessing memory and starting the FPU as required. The 68881 was the first Motorola FPU. The 68882's extra transistors (176,000 versus 152,000) can make it twice as fast for a given clock rate as its pipeline works on more than one instruction at a time.

FPUs are available in PLCC (Plastic Leaded Chip Carrier) packages, with connections round the edge, and pricier PGA (Pin Grid Array) chips which rest on a bed of golden nails.

FPUs can use CPU timings or separate crystals. Top-rated 50MHz 68882s only come in PGA, but PLCC ones are tolerant of overclocking.

From the 68040 onwards, Motorola made the FPU an option on the main chip. It's much faster at arithmetic but requires add-on FPSP (Floating Point Support Package) software for transcendental functions in the 68040 or 68060.library, loaded by *SetPatch*.

MathIEEE libraries handle IEEE single and double formats (see box), using integer code or calling the FPU depending on your setup. Programs that call the libraries work on any Amiga; the table shows that direct FPU instructions are faster, so many high-end applications come in special FPU-only versions.

The bias between arithmetic and transcendentals in separate and on-chip FPUs adds variations. 68040 FPU code is optimal on 68060s, though integer code is not. *OxyPatcher* (*AF107*, 95%) makes old code faster on recent CPUs by bypassing the FPSP.

FLOATING POINT FORMATS

Almost 20 years ago, the Institute of Electrical and Electronic Engineers (IEEE) set a standard, adopted by Motorola, IBM and Intel. It specified two floating point formats, single and double precision, and had special representations for infinity, overflow, underflow and 'not a number'.

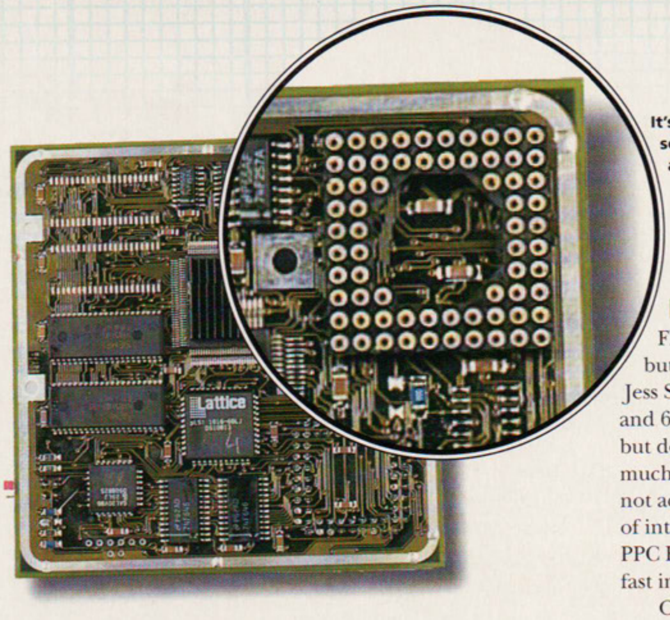
Single precision values occupy four bytes, accurate to about seven decimal digits and permitting around 38 zeros either side of the decimal point. Double

Floating Point performance

This table compares floating point speeds using direct FPU code and library calls. A500s score 1.00; a 25MHz 68030 without an FPU (standard A4000/'030) is four or five times faster.

The second column is for an A3000 with a 25MHz 68882. See how direct FPU code is substantially faster than library calls. The 68882 boosts transcendentals far more than simple arithmetic. The final columns rate 68040s and 68060s. Library overhead swamps arithmetic operation time, favouring direct FPU code, but transcendental speed lags behind. A top-speed 68882 might out-perform a 68060, unless you use *OxyPatcher* to avoid the FPSP overhead, but the 68060 is around ten times faster at simple arithmetic.

	68030/25 (no FPU)	68030/25 68882/25	68040/33 + FPSP	68060/50 + FPSP
Arithmetic – IEEE library	4.7	13.1	86	124
Arithmetic – IEEE FPU	N/A	30.0	240	507
Transcendental – IEEE library	4.5	151	178	265
Transcendental – IEEE FPU	N/A	242	189	385



It's a PGA socket. If you've got an FPU socket that doesn't look like this, it'll be a PLCC socket. So there.

precision values uses eight bytes, allowing three hundred zeros before or after the point, and 16 significant digits. FPUs handle them almost as fast.

Like most CISC systems (but not Power PCs) 68K FPUs allow 'extended precision' for temporary results, with 64 mantissa bits padded to 12 bytes, representing 19 decimal digits over a range of almost 10,000 decimal places.

Motorola's alternative four-byte format, FFP (Fast Floating Point) is similar in precision to IEEE single, but shuffled to make it easier for a bare 68000 to handle.

PATCHES

FFP outruns IEEE on slow machines but ignores the FPU on fast systems. Jess Sosnoski's FFP patch boosts 68881 and 68882 systems by five or six times, but doesn't help 68040s and 68060s much. Current libraries and patches do not actually use the PPC's FPU because of inter-processor bottlenecks, but native PPC Floating Point code is extremely fast indeed.

Optimised IEEE libraries save space by eliminating emulation code, only working on machines with FPUs. Some need the FPSP, favouring '020 and '030 systems. However, others avoid it, making them best-suited for '040s and '060s. Olaf Barthel's Shareware FMATH406 includes both types.

> Optimised IEEE libraries save space by eliminating emulation code, only working on machines with FPUs.

As with all non-standard libraries, beware of errors or incompatibility. Take backups of the old versions before you copy new libraries into LIBS:

As Pentium users found, the right answer is more useful than the wrong one, however quickly it's worked out. phase 5 warn that their custom FPSP may clash with PD patches but they don't say which or when.

PRECISION

Unlike integers, floating point formats are only accurate to a certain number of bits, or binary digits. In decimal a third is 0.33333... recurring. In binary it's 0.0101010101..., another infinite sequence. However many digits, it's an approximation.

A tenth is exactly 0.1 in decimal, but 0.000110011001100... recurring in binary. Monetary calculations are best done in integer pence or cents rather than decimal, or embarrassing (if insignificant) errors may show up.

If you want a really wide range of numbers then floating point is ideal. Konrad Zuse's electromechanical computers even used binary floating point arithmetic back in the 1940s!

FLOATING POINTS

A500[+]/600 A1000/2000	A1200/CD32 UNEXPANDED	A4000/EC'030 A1200/'030	A3000[T] A1200/'030+	A4000[T]/'040 &XC68040 AMIGAS	A4000T/'060 & XC68060 AMIGAS
68000 No FPU	**68020 No FPU**	**68030 No FPU**	**68030 68882**	**68040 '040+FPSP**	**68060 '060+FPSP**
You need a 32-bit CPU to use an FPU effectively. A2000 and now A500 and A600 accelerator cards can add 32 bit RAM and a FPU at the same time	Even 32-bit trapdoor RAM with no change of CPU will speed up all operations and allow an FPU to be added. The socket may cost you more than the FPU itself!	An FPU will speed up rendering, fractals, sound and image processing but makes no difference to 2 Mb/'020 or A500/600 software that doesn't use the IEEE libraries.	A 68040 or 68060 will perform simple FP arithmetic operations ten or more times faster than a 68882, but offers far less of an advantage on maths functions.	Commodore made some A4000/LC'040s with no FPU. phase 5 may follow. These can be upgraded to a full XC68040 with an FPU. Check library versions.	Current '060 Amigas always include a full 68060 with an FPU. phase 5 users – load *CyberPatcher*! Check library versions.
If skint, program using FFP rather than IEEE FP maths libraries.	Use FFP library if possible and avoid IEEE DOUBLEs. (APPLIES TO BOTH)	Try SoftFPU if using Macintosh emulation. (APPLIES TO BOTH)	Use free floating point library patches from Aminet and AFCDs.	Consider FPU library patches but beware of 040.library interaction.	Consider FPU library patches but beware of 060.library interaction.
TIPS FOR THE ADVENTUROUS					
Build a memory – mapped FPU interface (non-trivial) and write assembler to intercept CPU FLINE exceptions.	Most RAM cards and accelerators have FPU sockets. CPU accelerators boost general processing as well as floating point. Check whether the price includes both FPU and MMU.	Plug in a PLCC FPU and perhaps a crystal. Solder in a PGA FPU socket (hard). Add a suitable crystal or select motherboard speed (= 25MHz for an A4000/EC'030)	Replace your 68881 with a 68882. Modify the FPU clock to run as close to 50MHz as you dare. Add a crystal or tweak the A3000 PCB (see the *AFCD*).	Consider *OXYpatcher*. Add a fan and try clock rates up to 40MHz. If there's a separate crystal, its rate is often x 2 e.g. 50.000MHz for a 25MHz A4000/'040.	Consider *OXYpatcher*. Speed up clock if crystal is socketed. 85MHz is the fastest we've heard of. Most work at over 60MHz. Beware of heat, RAM and logic limitations.





MailBag

Send your letters to: Letters To The Editor • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW or email: amformat@futurenet.co.uk – putting 'Mailbag' in the subject line.

SEND US	SPARE US
Ideas for the mag	Complaints about lack of game reviews
Your own Amiga adverts	Comments about how long it takes
A completed subscription form	*AF* to reach Timbuktoo
Things which make some sense	Nonsense
Comments and queries	Technical problems (address them to Workbench)
Letters via the Internet	Complaints about the Internet
Interesting uses of the Amiga	Dull uses of the Amiga
Amigas you have seen in Vegas	Amigas you have seen in Tandy

A HARD LESSON

I'm writing to tell you about my problems with *Championship Manager 2*. I bought it just before Christmas from the Loughborough branch of GAME as there are none in Leicester city centre, and it's the only High Street store that I know of that sells Amiga games.

I booted it up then set up the game as shown in the manual, played it for a while and then saved it to disk. My attempts at reloading have been unsuccessful – at one point I left the computer running for 6 hours but my saved game still hadn't loaded.

I have written to and emailed Eidos Interactive, but I have received no reply. I also telephoned their helpline and was told to reformat my saved game disks from Workbench and start again. I did this and nothing changed.

I know that the Amiga isn't exactly Eidos' top priority, but I expected better service than this. Has anyone else who bought the game had the same problem? Do you have any advice for me because at the moment I am left with a game that cost me £29.99 which I can't even play.

Simon Parry
Leicester

You should know better than to go and buy a game which we awarded a mere 12%. We found this software incredibly flakey, although after disconnecting anything resembling an accelerator and fiddling around with some of the options, we did manage to play a few games.

To be honest with you, you are not missing much. It takes hours to play and some of the results are a little far fetched. For example, in our first season, we, as Bristol Rovers, managed to convince Newcastle to play a friendly with us. At the Memorial Ground. Only 3,600 people turned up to watch. And Newcastle only went 2-1 up in the 87th minute. Shearer got a red card. Does this seem like a likely scenario to you?

If the software simply does not work for you then you're entitled to a refund (as it is not fit for the purpose for which it was sold). Just take it back to the shop you bought it from and ask for your money back.



Newcastle only just scraping a win against Bristol Rovers? Actually, at the moment, that sounds quite realistic...

CONSPIRACY THEORY

It seems that Microsoft are paying Amiga programmers to start on game projects and then stop them. Then they put messages on the homepage saying things like,"Amiga sucks go buy a PC".

Take a look on Amiga Nutter new Lambda demo/Lambda homepage. It includes a link to the software Dictator web page at Microsoft! Have you heard of any more of this childish behaviour?

Sabrina Online by Eric W. Schwartz ©1997 "Fowl Terror Incarnate"



Check out Sabrina Online at http://www.coax.net/people/erics/

Are all the current Amiga game demos just fakes that will never appear on the market, funded by Bill Gates and his monopoly crew, or is this just the work of a childish PC owner who haven't got a suitable Amiga to run the code he has programmed? Hey, I've got a 233MHz PC with *3DFX* and all that, but I still enjoy using my Amiga.

Peter Baldwin

I believe it probably is. No really, I do.

OMISSION IMPOSSIBLE

If you were reviewing a CD drive, you would say what speed it was. If you were reviewing a hard drive, you would say how big it was. If you were reviewing a printer, you would say what DPI it was.

So why in the hell did you not tell us the speed of the Pace modem you reviewed? You told us all about its lovely features, its pretty lights and so on, but you just didn't mention the most important thing of all!

I checked it carefully just before sending this so I wouldn't make a tit out of myself and I did notice that the picture had a barely legible 56 on it, but you know you should have told us! Ben Vost, go shoot yourself.

Matthew
mash@dingnet.demon.co.uk

I'm sure if I asked Ben he would come up with some plausible excuse, or try and blame it on resident scapegoat Colin. So I won't. I will simply make sure his sword is nice and sharp, confront him with the evidence and hope he does the decent thing. The modem was, as you deduced, a 56K modem which supports the K56 standard. Free upgrades will be available for V90 compatibility where necessary.



The new Pace modem. It's 56K, don'tcha know?

NOBODY HOME

Just recently I downloaded *AmiPhone* from the web. A utility like this, that allows verbal communication between two people anywhere in the world at the price of a local phone call, seems great to me.

After I had tested it as much as possible by myself I went out on IRC to find other people who I could try it with. I was shocked to find only one other person who actually had a working copy. The only real requirement for this package is a sound sampler, which I'm sure many Amigans on the net have.

I would like to see more people using this program and have opened up a channel on DalNet called #AmiPhone. Admittedly, it is empty at the moment, but if anybody is interested then feel free to call in or contact me on IRC under the nick n060.

Neville Robinson
n.robinson2@ukonline.co.uk

So you're hanging on the telephone then, are you? Well, I'm sure you'll find someone on IRC who'll give you a call.

ENEMY NOT FOUND

As a regular reader of your excellent magazine, I unfortunately have reason to complain. In the March 1998 issue you ran a page detailing what was coming in the following issue. *UFO: Enemy Unknown*, the page says. Coming Next Month, the page says. Excellent, I said.

I had the game a while ago until it developed a read error and I've missed it. What the page doesn't say is CD Only. There I was, eagerly awaiting the next issue of my *Amiga Format*, just itching to get my hands on *UFO* again. There must be some mistake, I thought, when *UFO* was nowhere to be seen. It must be on the floppies or those nice people at *AF* would have said so.

Apparently not! Hence, one extremely disappointed and rather angry reader. I know the moral of this story is to buy a CD-ROM, which I fully intend to do, but if it is to be CD only then let your readers know that.

Other than that, I must congratulate you on a rather brilliant magazine. I especially like the Reader Ads idea. The simplest ones really are the best. Keep the Amiga flag flying chaps, you're doing us Amiga fans proud.

D. J. Burd
Leeds

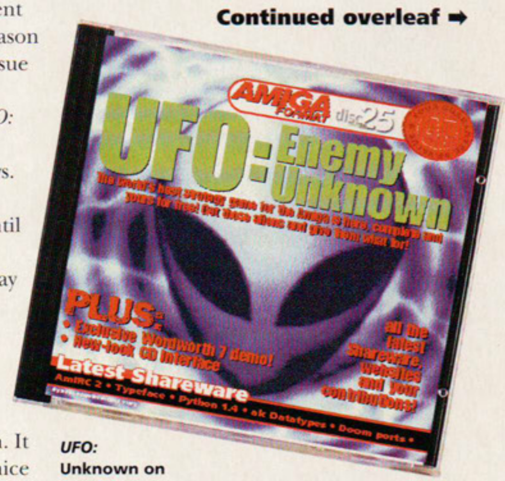
We were intending to bring you UFO *on floppy disk too, but unfortunately our compression robot, Dave Taylor, was unable to crunch them all down onto two disks (the original game came on four floppies, remember). I'm sorry to say that, at the last minute, it just wasn't possible.*

This month we have managed to compress the complete F1GP *disks onto just two floppies, and though the Taylor robot went through a lot of oil, I'm sure you'll agree it was worth the effort.*

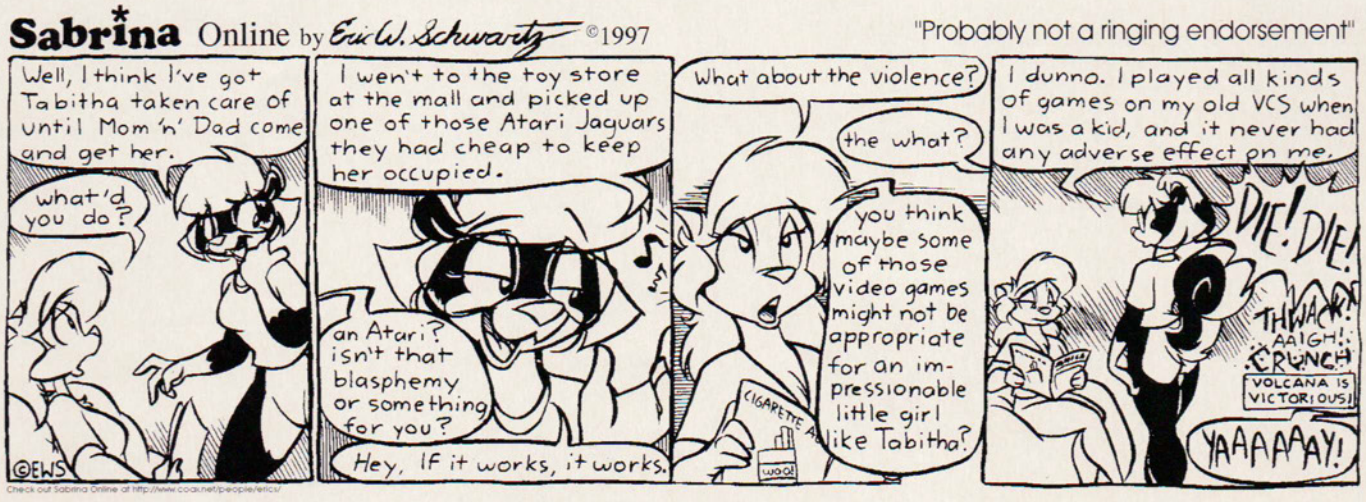
PACKING IT IN

Thanks for publishing my help ad (59 and Thick, North Wales) in April. The response was amazing! I had half expected some*one* in the locality to make contact. The help and advice came from

Continued overleaf ➡



UFO: Unknown on floppy disks, but surely that's a good reason to upgrade to a CD drive?



all over the country: London, Rugby, Crewe, Morecombe, Leeds, Cumbria, Edinburgh, Bournemouth, and from others who phoned but never got through to me.

As an Amiga user, all the advice was appreciated. Some of it went over my thick head but the thought was there. Now I need to fit a hard drive, upgrade the memory, add an accelerator, CD drive and printer and buy *AF* every month. I think I'll have to pack up the cigs, beer and wild women.

John A. Platt
Flintshire

I'm glad we could help. Meanwhile, if you no longer have any need for the commodities you mentioned, you know our address.

SCOTCH MYST?

Having just paid a visit to Electronics Boutique to purchase *Myst* and *Quake* (even though my A1200 is not up to running them yet!) I was disappointed to see that they did not have them in stock. After a chat with the sales person to find out when they would be stocking them, I was told that they did not know, but would probably be getting them in soon.

Problem – I want to know now! Solution – phone EB Customer Services (0800 317778) and ask to speak to the buyer concerned with Amiga games and ask him/her. Unfortunately, I could not get through to them at that time but I was told that they have had a lot of phone calls by other people wanting to buy Amiga games not in stock, even though they were available via mail order. The moral of this is that if you keep on at people then they will listen eventually.

C. Windsor
Southampton

Well, Myst *is certainly widely available now, so your local EB should be able to obtain it. As you may have guessed,* Quake *has undergone the scrutiny of id Software and is ready for release now, and should be reaching your local shops very shortly. Read the review, then rush out and buy a copy! I suspect they will have filtered through to the retail chain by the time you read this.*

DIGICAM

Cast your mind back to the days of the Christmas '97 issue when you did a review of the Sanyo Digicam… Remember? Anyway, in the article you mentioned the software written by TTL Marketing wasn't quite ready for review.

Is the software now ready? Does it come with the camera? Do I have to download it? Are you going to put it on the CD or should I buy a different camera now? An answer to at least three of these questions, please.

Philip Coe
via email



The Sanyo Digicam may soon be powered by software from, erm, Power Computing.

I remember it well. Because of an irrevocable breakdown in relations between the publisher and the programmers, the software has never been produced. In fact, in spite of us being contacted by several people in the meantime, saying the software was ready and would be "in the post" shortly, it has never appeared through these portals.

I can tell you that Power Computing (whose Mustek camera is reviewed elsewhere this issue) are planning to adapt their camera software to work with a range of digital cameras, including the Sanyo Digicam. If you have your heart set on it then it's probably worth the wait.

PIRATES AHOY!

I am fed up with hearing Amiga software developers saying piracy is a problem. Amiga users are spread out around the globe, so how can this be a problem any more? If it's due to any particular group of Amiga owners then say so.

I don't have any contact with other Amiga owners and I wouldn't want someone else's dirty copy anyway. Many of my friends own PCs and, as far as I can tell, PC software companies, especially Microsoft, are the ones with this problem now and it's going to get worse. If there are any Amiga owners giving illegitimate copies of software to others then I spit on their graves.

Warren McGill
Ash

I feel compelled to point out that since the rise of the Internet, physical locality has little effect on the spread of pirate software. And it can have a dramatic effect on the sales of software. For example "cracked" versions of* MasterISO *were available on the Internet before the final version was released. Fortunately, this was just a hack of a demo and didn't have any real functionality. If it had, it could have been devastating. There are fewer active Amiga users now so piracy is even more threatening to continuing development. I'm glad to hear you are not a nefarious evil-doer. Sadly, not everyone is so honest.

MISSING GAMES

I have been having trouble trying to acquire two of the best platform games around (as far as I'm concerned anyway), *Nicky Boom* and *Nicky 2*, and the original *Tank Command* (the one off the arcade machines which I think was available for the Amiga a few years ago).

I've been after them for about two years now and have exhausted every avenue looking for them. Any help would be much appreciated. I can be contacted at my PD house at: Apollo PD, 63 Borron Road, Newton-Le-Willows, Merseyside, WA12 0JU or phone 01925 290229 or 01942 707456.

Stig

I hope one of our readers can help. If anyone else is looking for an old game, why not take out an ad in our completely free Reader Ads section?

FSP

Please help! Way back in November 1996 (*AF90*) you gave away a demo of *Football Statistician Pro*. When I saw how good it was I contacted OTM for the full version but was told that they were not continuing with that particular software any more.

Since then I have tried other football league programs including *SuperLeague v4.05* (full version) but nothing quite compares to *FSP*. I recently tried to contact OTM by phone to see if they had changed their minds, but I guess they are no longer in business as the number has been disconnected. Can you tell me if OTM still exists or if *FSP* was ever released and, if so, where can I get it?

Derek Downing
Great Yarmouth

Sadly, OTM never released the full product and the company disintegrated soon after. If anyone knows anything regarding this product, please get in touch.



For those hard to find games, why not take advantage of our free Reader Ads service?

SON OF WORKBENCH

I recently wrote to Workbench with what I think was quite a tricky problem. I realise that you can't answer everybody's questions immediately but until I get some help, I'm stuck.

This got me thinking that perhaps one solution would be to put a version of Workbench on the monthly CD, with answers to the questions you couldn't find space for in the magazine (although it would probably help to change the name from Workbench – we don't want to confuse people, do we?). I suppose you could also list any questions which your combined knowledge was unable to answer.

Anyway, congratulations on an excellent magazine. Keep up the good work.

Ian Hewitt
Scunthorpe

An interesting idea. Unfortunately, one of the constraints to answering all the queries we receive is the length of time it takes.

However, we may be able to put something together along those general lines to be included on the CD.

Well done, you've won yourself an AF sweatshirt.



BEETLEMANIA

My friend owns a 1958 Volkswagen Beetle. It cost him £2,000 four years ago and since then he has spent over £8,000 pounds rebuilding it. It has a 1192cc engine which can pull the car to almost 60mph, a cold uncomfortable interior, 6 volt electrics, crossply tyres, a dodgy gearbox and you can't hear yourself think inside. With the money he has spent on it, he could have had a nice Ford Fiesta with a 16 valve engine which could do 100mph with a nice stereo, accurate steering, air-conditioning, alloy wheels, a sun roof, decent brakes, comfy seats, driver's airbag, remote central locking (you get the idea).

However, he doesn't want a Ford Fiesta. To him the Beetle is more than a car. It is not a mode of transport, it doesn't matter that it can't even reach the speed limit, that he can't listen to music in it, that it rattles and grates as he drives it – that's not the point.

The point is that it has character, a personality of its own, that it runs well enough for him because he's not bothered about racing Escorts at the traffic lights. He is above that, a different breed, one whose tastes are dictated by what he knows he likes, not by the latest trend.

Anyone can spend £10,000 and own a Ford Fiesta but not everyone has the passion required to drive a beetle. To him there is no comparison, because to him the Beetle and the Fiesta aren't even in the same class.

Sam Cooke
Cambridge

Er, yes. You weren't writing to Top Gear *and got your envelopes mixed up by any chance? Or are we into serious analogy territory here?*

CAT PEOPLE

I noticed in the current issue (*AF109*), on page 73 there is a picture of a bloke holding a cat with the caption "John Kennedy". Now, is it the cat or the bloke that is called John Kennedy? Does this mean that Workbench is in fact written by "John Kennedy the Technical Support Cat?", or is it just that Mr. Kennedy has grown a cat shaped beard?

Peter Gordon



We told him we wouldn't let him out until he'd answered every single one of your questions.

John is the bloke, unfortunately. The picture was taken while he was hard at work for his other business, running a cat fur factory. Interestingly, the particular cat that he is holding is actually his main source of information on problems regarding mice. Let's hope it doesn't grow up too fast.

CONCISE. TO THE POINT.

Excellent magazine. I buy about four to five issues a year. I bought issue 104. I was looking for *Kit* and also saw *VirusZ*. Attempted to load up *VZ* but without success. Have now made another attempt at loading up *VZ* but still no luck. I have lost 5 hours trying to load *VZ* onto my HD. I wish brilliant people like the author of *VZ* would spend more time making installation easier. I am not a programmer. I just want to run an Install script or drag an icon. I do not want to know which Libraries should be in which Drawer to install the software. It doesn't interest me. I don't need the hassle.

Doodling around with the CD at a more recent date and doodled with *IconX*. Noticed it was writing to floppy. Don't like this. Panic sets in. I have much work on HD. Press Escape which stopped the install and re-booted. *VirusChecker* comes on. I removed the floppy and threw it away. Jumped out of window, again thinking to myself as the ground rushed ever nearer that at least *VirusChecker* had done its work and wouldn't it have been nice to have just dragged that Icon for the new *VirusZ* and selected Install Libs. before I landed face down in the flower bed. It's not funny. I would gladly send $20 if I could just use the software, even in a restricted form, to get some idea of what it'll do.

I don't want to keep buying the excellent magazine on a monthly basis just in case *VZ* comes on again. What am I to do? The Internet is going to increase the risk of viral infection for us all. We will have to be careful. The thought of some virus infecting the megs of work on my HD is frightening. I am continually backing up to floppy but file size is limited. It's scary.

On the mag. General. I think it's not important to have the CD filled every issue. I would like to see the really good software appearing in each issue. *VirusZ*, for example, could be on the CD every issue. Advertising and making use of itself. Updated on occasion by the author. Anyway, will buy the magazine again sometime and hope that *VZ* is in there and that I will manage to install it. And make use of it. And if I like it then I'll send the guy his $20.

AB

Thanks. VirusZ. *Easy to install. Although no complete script. Double click on Install libs. The libraries will be installed. Drag all the other files to hard disk. Run.* VirusZ *works. We do keep up to date with virus checkers as they are released, and you will always find certain essential tools on the CD – like* VirusZ *and* Xtruder. *You'll find them in the "Handy Tools" drawer, now located in the System drawer. By the way, "AB", if you think the magazine is so great, why don't you buy it more often?*

MR FLOPPY

Would it be possible to put the best of Andy's Reader Games on the floppy each month?

This would increase the sales of the DD version of *AF* and would remove the frustration of not being able to play the games or contact the programmers.

R. K. Withers
Hayle

There are a couple of reasons why we don't normally do this. The first is that the disks have to be prepared before the rest of the magazine and the other is that most of our reader games tend to be big, so you would probably only get one on the floppy disk anyway.

Of course, in the case of a really good game, we are happy to devote a whole disk to it.

Reader Ads

An amazing assortment of Amiga-related stuff, to buy, sell or exchange, in our great new-look Reader Ads!

FOR SALE

Amiga 1200, 2Mb, 1942 colour monitor, Canon BJ10SX inkjet printer, additional disk drive, Wordworth SSE word processor, over 20 top games (boxes), all manuals, leads, £240. ☎ Andy 01903 244402.

Apollo 1240, 40MHz,8Mb, £150. External 4x speed CD-ROM with Squirrel and lots of CDs, £80. Microvitec 1402 multisync 14" monitor, £150. Prices include postage. ☎ 01238 561689 or email paul@booke.demon.co.uk

A1200T, 32Mb fast RAM, '040 FPU, Zprro II x5, 1.7Gb HD, 8x CD-ROM, PC keyboard, 4 ch IDE, full size MicroniK tower, software, DPaint 5, PPaint 7.1, ProGrab diditiser, netconnect, Dynalink 56 modem, STFax Pro, plus MIDI, Octamed 6. £750 ono. ☎ 01202 470615 (weekends only).

Tascam 4 track mixer/recorder, pass trough for stereo mastering of your Amiga music. Excellent condition, £150 ono. Doom 2 £10, Gloom 3 £10. ☎ Martin 0171 4952657.

27 original boxed games including Sim City 2000, Sim Life, World of Lemmings, Shadow Fighter, Syndicate, Soccer Kid, £3 to £7 or £85 the lot. ☎ Matt 01260 279505.

A500 with CM8833 monitor, second drive, 2Mb RAM expansion, Action Replay, games, manuals, joysticks, £130 ono. ☎ Carl 0181 4410482 (evenings).

A1200, 10Mb RAM, Blizzard 1230 mk IV, 50MHz, 4x CD-ROM, 120Mb HDD, colour printer, 2 joysticks, hundreds of games inc. Doom 1/2, demos, mags and CDs. Fully installed and working. Must be collected. £500/offers. ☎ 01727 832385.

HP Surestore internal SCSI CD writer for sale. 6 speed read, 2 speed write. Includes two blank media. £175 ono. As new.☎ 01203 348486 (evenings).

Amiga games for sale. All boxed originals including Civilization, Zeewolf and Sim City. Phone for a list. Also wanted: Beneath a Steel Sky and Coala. May consider swaps. ☎ Anthony 01236 732520.

CD32 plus sx1 with keyboard, 60Mb internal drive or 3.5" external drive (power supply and cable available). 8Mb fast RAM switchable for games compatibility, £120. ☎ 01202 733665.

Eyetech EZ tower, including non-working motherboard for spares/repairs. Squirrel SCSI with 2x speed CD-ROM. 2 floppy drives. £80. Can deliver local (Staffs). ☎ Dan 01782 410156 or 07970 836069.

Squirrel interface and Mediavision CD, £70. DD external drive, c/w software, £35. External drive, £25. A1200, £95. 8Mb Blizzard 1230 IV, £90. Postage paid, games, magazines, disks, CDs. Ring! ☎ Barrow 01229 811969.

A1200 PCMCIA 200Mb hard disk, £30. A1200 Chaos Engine and Zeewolf, £5 each. Real 3D software and manual, £10. All for £40. ☎ Dave 01952 432079.

PC Task 4.3, emulates a PC 486 for A1200 or A4000. Sell or swap for Amiga Genlock. A1200 with hard drive and progs, £100 plus carriage. ☎ 0113 2930758.

A1200, 68030/50MHz, 8Mb RAM, 210Mb HD, 8x CD-ROM, CD and HD in tower case, 14.4K modem, extra F/D, A1438S multisync monitor, Wordworth 6 Office, DOpus 4, analogue joystick, lots more software and cover CDs. £500. ☎ Mike 01343 821178.

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Free!

Multisync monitor, CBM 1942, original packaging. All disks and manuals. Displays all screenmodes, £80 ono. ☎ Scott, 01483 576840 or email scott.hughes@uk.novus.com

Prograb 24RT plus, £65, or may swap for other A1200 hardware, particularly accelerator/RAM expansion board, external CD-ROM drive, KRP drive or KRP edit plug. ☎ Andy 01242 575308.

A1200 PSU and keyboard. No longer needed due to tower upgrade. £10 each plus P&P or swap. ☎ Adrian 01960 366670 (evenings/weekends) or email a.boone@kainos.com

Amiga Magic, 2Mb, 170Mb hard disk with all original disks and manuals with over 50 games, £250. Citizen ABC colour dot-matrix printer, £50. ☎ 01543 264921. Buyer collects.

25 boxed, original games, £3 to £7.50. Parallel printer cable (new), £5. SCSI cable 3-connector, £5. DPaint III manual, £5 ono. ☎ 01709 814296 (ask for Terry).

14" Amiga monitor, Star LC20 dot matrix printer. 200 A4 sheets paper. £35 each or £60 for both. All cables and monitor speakers included. ☎ Greg 01483 536430 or email greg@letissier.demon.co.uk

A4000/'040, 6Mb RAM, NEC 3D multisync monitor, £550. ☎ 01895 234099.

A4000 Commodore accelerator board. Full '040 25MHz with FPU, fits into CPU slot, £90. Also, Vidi Amicart framegrabber, £60. ☎ Pete 01705 877390.

Microbotics MB1230XA accelerator with 50MHz, '030, MMU, FPU, 8Mb SIMM, fan, £100. Various games, £10. Lightwave 3.5, £50. Imagine 5, £40. ☎ 01405 860798 after 6pm.

A1200, 160Mb hard drive, DSS8 sampler, boxed. SCSI Squirrel double speed CD-ROM. 8Mb 33MHz FPU plus 4Mb SIMM as spare. Loads of software, £350 ono. ☎ 01224 538195.

170Mb hard drive, Classic Squirrel, Power Computing 1204 memory board with 8Mb memory. £150 the lot. Various boxed games, hardly used. Disks and boxes in perfect condition. £40. ☎ Adrian 01224 681397.

Microvitec Deltascan 1402 monitor, horizontal 15-40KHz, vertical 45-10Hz, £130 ono. Buyer to collect or pay postage. ☎ 01494 711223.

Vidi RT24 video digitiser cartridge for Amiga 1200. Enables video images to be grabbed as still images on the Amiga which can then be used in other software. In excellent condition Complete with box,instructions and mains adapter. £70 ono +P&P. ☎ Kevin 01603 402803. (evenings) or email k.mayes@virgin.net

Amiga parts, PPaint 4.0 and 6.4, Cinmorph colour hand scanner, 2x CD, ROM and Squirrel, Print Studio colour master, Digiview Gold, Colour splitter Rombo, Spare chips for CDTV and A500. ☎ Keith 0976 421404 (01322 359720 evenings).

AMOS creater, compiler, 3D. 10 boxed games including Sim City 2000. Complete Amiga C, Wordworth, Paint, C64 emulator, Amiga cover CDs. Joystick, mouse, 8Mb 72 pin SIMM and more. £100. ☎ 0151 342 7370.

A600, 340Mb HD with mouse, joystick, power supply, original manuals, Workbench disks, games: Theme Park, Fifa Soccer, Double Dragon and more, £120. ☎ Maurice 0171 7876167.

Eyetech EZ tower including non-working motherboard for spares/repairs. Squirrel SCSI with 2x speed CD-ROM. 2 floppy drives, £80. Can deliver locally (Staffs). ☎ Dan 01782 410156 or 07970 836069.

USER GROUPS

Kickstart, Surrey Amiga user group. Meet last Monday of the month in Ottershaw (nr. Woking). Internet access and Amiga surgery. Everyone welcome. ☎ Rob 01932 875336, email gilbie@arrakis.u-net.com, website: www.arrakis.u-net.com.

Amiga contacts wanted for Amiga users club in the Fife area. Everyone welcome, all you need to come is a Amiga. Email asse00288@cableinet.co.uk

Colchester Amiga Forum. Meets third Wednesday of the month at The Swan Pub, Stanway, Colchester. For details ☎ Patrick 01206 212864 or email pjmead@hotmail.com or just come along.

Got a modem? Why not call Red Green Blue BBS, the newest around. 10pm until 7am weekends, running at 57.6K. ☎ 01947 602024.

A1200 4Mb RAM card. £20, will post. ☎ Kevin 01443 778238.

PERSONAL

Amiga CD contacts wanted to swap and sell. Write to Ian Otter, 5 Vaughan Avenue, Grimsby, DN32 8QB or ☎ 0411 715548.

Many thanks to all those Amiga mates who contacted me with help and advice. The response was astounding. I will contact all those others who left messages but missed me. John A. Platt.

Articles wanted for the disk mag "The Ripper". All contributions gratefully received. For more information or to send articles write to 108 Zetland Road, Town Moor, Doncaster, S. Yorks, DN2 5EJ.

Contributors required for new diskmag. Anything considered. Got material you'd like to be seen? Then write for details: Michael Hogg, 3 Jeanfield Road, Forfar, Tayside, Scotland, DD8 1JS.

Contacts wanted to swap games, hints and tips. All Amigas. Send list to N. Birnie, 121 Buchan Road, Fraserburgh, Aberdeenshire, AB43 9UG.

S. Baron – I saw you won a competition in AF. I am also an A1200 owner. Do you want to swap games with a fellow owner in Sunderland? ☎ Geoff 0191 5108230.

A1200 contacts wanted to swap PD and Shareware. No pirates please! Send letter and software list to Daniel Clough, 27 The Oval, Lincoln, LN2 4EX. Amiga penpals welcome!

Amiga novice desperately needs help getting external SCSI drive Zip drive working with OS3.1 A1500. Disk will not format, have Zip tools, tried everything. ☎ 01453 882912.

WANTED

Manuals for Music X version V1.1 sequencer or manual for Bars and Pipes sequencer desperately wanted. ☎ Dave 0161 2850766.

AMOS Pro and Pro Compiler. £25 for both, or will buy separately. ☎ 0181 4739584 or email tobes@ukonline.co.uk

Morph Plus, boxed with manual. Also, manual for Photogenics. ☎ Peter 01924 256545 or email b.higginsbottom@virgin.net

Final Writer 4 Lite or Final Writer 4. Full Versions. ☎ Jim 01509 507253.

Printer driver for Olivetti/Acorn JP101 and/or Printer Driver Construction Kit. Also manual for JP101 printer. ☎ Patrick 01206 212864 (not weekends).

Skweek from US Gold. ☎ 01768 352474 or write to Croft House, Hoff, Appleby, Cumbria, CA16 6TA.

New Amiga user (1Mb) seeks programs (not games). Will pay. Any replies appreciated. ☎ 01942 221267.

Emplant hardware (SCSI and Appletalk version), GVP 1.0 Extender. Email alan@stokes1.u-net.com or ☎ Alan 01902 566944 after 5.15pm.

Games for A1200. Any considered. Cash waiting. ☎ 01506 492114.

Help wanted for Universe. Complete solution required. Contact N. Birnie, 121 Buchan Road, Fraserburgh, Aberdeenshire, AB43 9UG.

Microvitec CVB monitor, model number 1431MS, lead wanted to fit A1200. Has 6-pin DIN socket on back of monitor marked TTL. ☎ 01553 761864.

Has anyone got a manual for MusicX v1.1, or I would purchase full software. Urgently needed. Will pay all postage, costs, etc. ☎ Bil 01564 782747.

Sim City (original or deluxe version), Lemmings 2, Rainbow Islands for A600. Will pay postage if necessary. ☎ 08707 501482 ext. 258.

Alien Breed special edition. Looking for disk 1 as mine has developed an error. Can anybody help? ☎ Donald 01422 350159.

Disney Animation Studio. Boxed original. ☎ Dale 01902 479656.

Red Baron. I recently bought a second-hand boxed copy from a dealer but the maps are missing. Can anyone help please? ☎ 01275 845173.

Any mags or games CDs compatible with A1200. ☎ The Crafty Cockney 0191 5108230 (after 4pm).

Prograb 24RT plus, with original software and manuals. £50. Must be in good working order. ☎ 01495 755199.

RKM manuals. I need the RKM libraries and hardware reference manuals. They must cover v37 of the OS. ☎ 01626 366720 (evenings only).

Universe (CD³² version) and SWIV (AGA) wanted. Can anyone help? ☎ 01635 826871 and ask for Mike (evenings only).

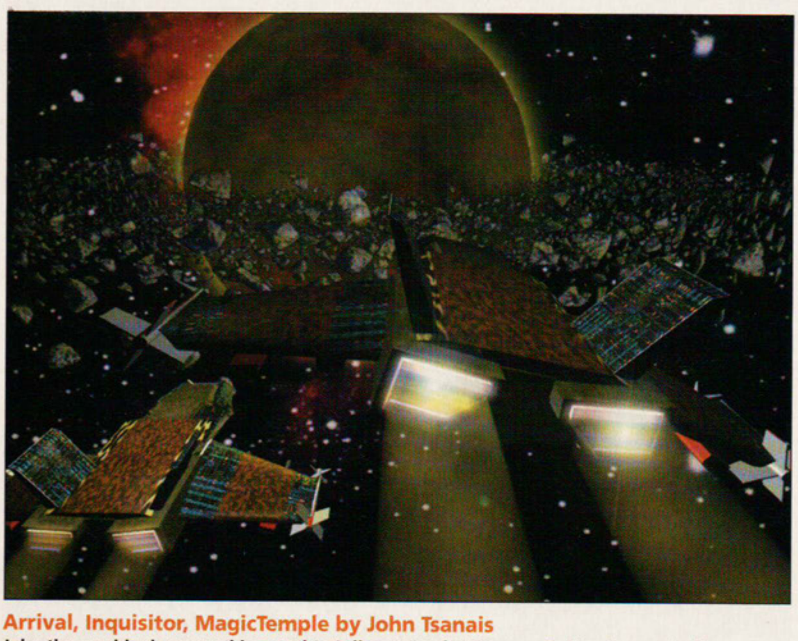
The Gallery

ON THIS MONTH'S CD

AFCD27:-ReaderStuff-/-Gallery-

Spaceships, sunglasses, shotguns, **Ben Vost** and, erm, models of bees? It must be the Gallery…





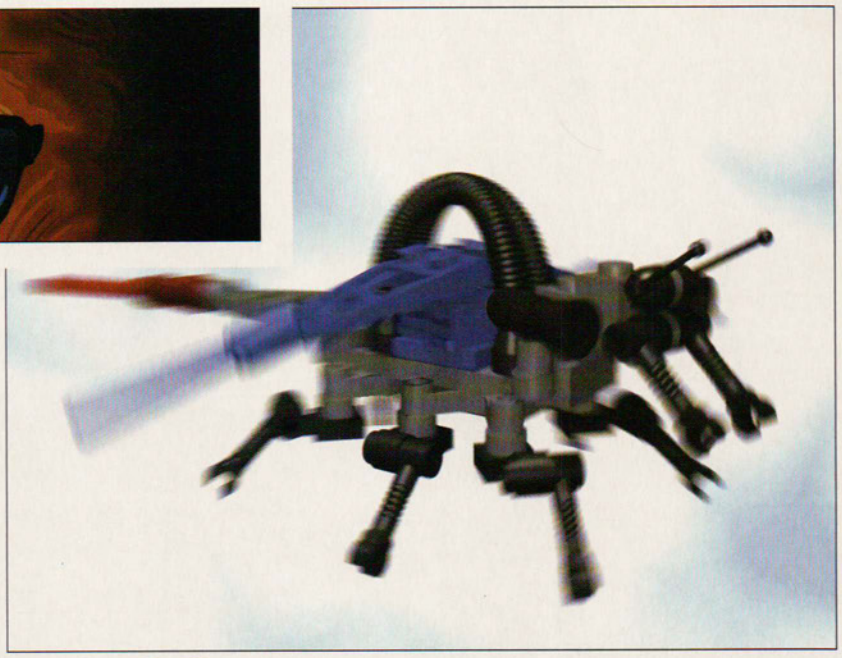


Arrival, Inquisitor, MagicTemple by John Tsanais

John thoroughly deserves this month's Gallery prize for these and other images he has submitted this month. All with a science fiction theme, John has obviously taken inspiration from *Aliens* and other such seminal sci-fi greats.



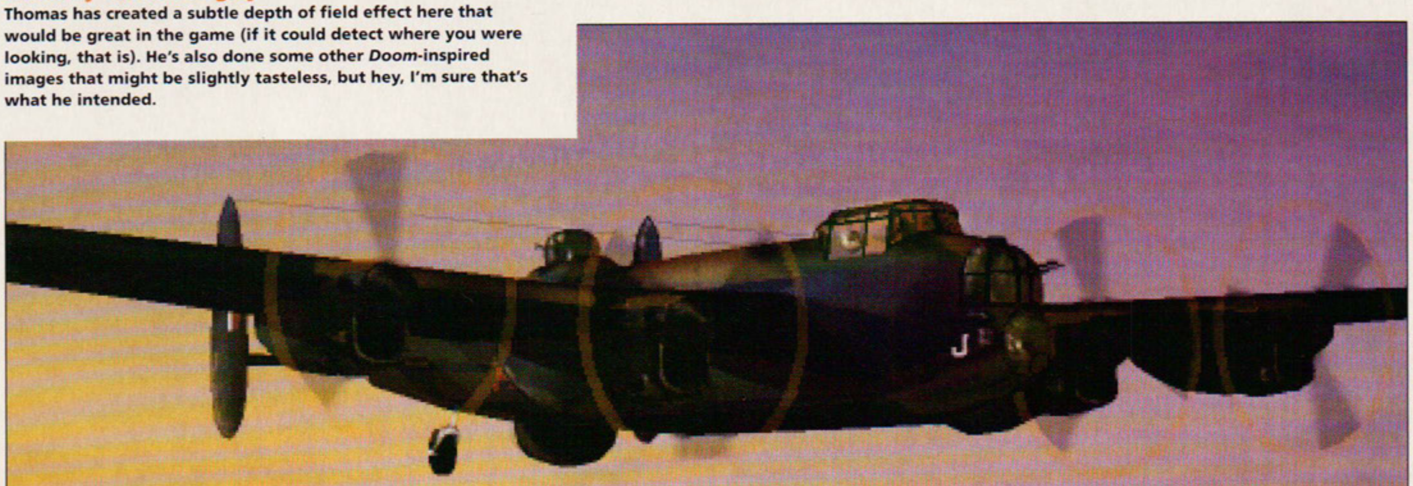
BlueEyes by Daniel Pimley
It's always nice to get pictures from readers that aren't solely designed for screen resolution and this one's no exception. Daniel's also done a nice ad for the Amiga, which is on our CD.



Bee-24 by Nick Milligan
This is a first, I think. I don't believe that anyone has made a model of a model of a bee for us before. Sure, we've had houses, but they hardly count, do they?



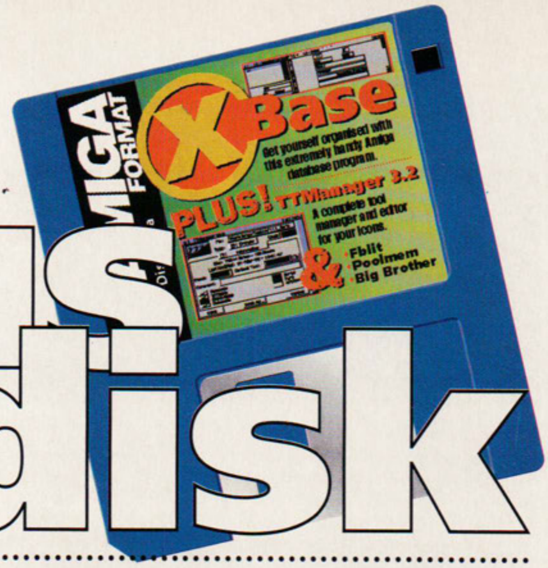
Doom by Thomas Cogley
Thomas has created a subtle depth of field effect here that would be great in the game (if it could detect where you were looking, that is). He's also done some other *Doom*-inspired images that might be slightly tasteless, but hey, I'm sure that's what he intended.



DuskDeparture by Derek Thompson
Nice to see Derek back this month, and this time with a readme file so we know who he is! Another cracking picture, rendered in *Imagine* and then placed over a hand-drawn background created in *Photogenics.*



Eagle-moon by Bill Carr
I liked the way this one used a diagonal brush to get across the scrollwork and, as Bill says, there aren't any spaceships in it.



Serious disk



AMIGA FORMAT

This month's Serious disk brings you a database, a Workbench enhancement and two sets of tools to speed up your Amiga. David Taylor introduces them.

XBase

The average human brain can remember seven facts at any one time, give or take a few. Can't remember where I read that, but it's true, which is one of the reasons why you should use your Amiga to remember things for you. In fact, there are plenty of other reasons too. After all, you'd be hard pushed to re-order a list of items according to different criteria in your head.

This is what databases are all about though. Many people use spreadsheets as databases but this is a waste of the computer's potential. This month then, thanks to this new database called *XBase*, we're going to sort out our own project.

And guess what – as an example we're going to build a database of the *Amiga Format* coverdisks.

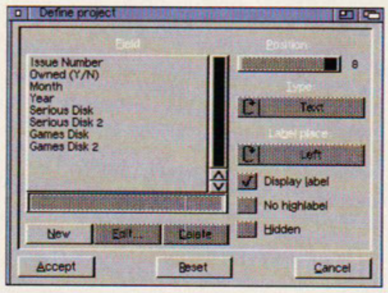
GETTING STARTED

Designing a new database in *XBase* is a two step process. First, choose define from the Project menu. This allows you to enter the names of the fields you want to use within your database.

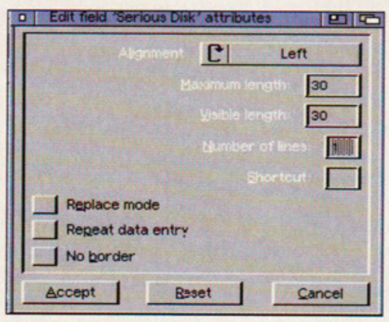
Click on the New button and then change the name from Untitled to Issue Number. Press return so the change is accepted. You can now choose the type of data that will be entered into this field – text or amount (number). You can also choose where the label for the field will be placed – left, right, above or below the data entry box. If you don't want a label to be shown, you can de-activate it.

The label shown will be the name of the field that you have entered. The Issue Number field should be set to Amount and place the label on the left. As this is the first field, it can only be in position one.

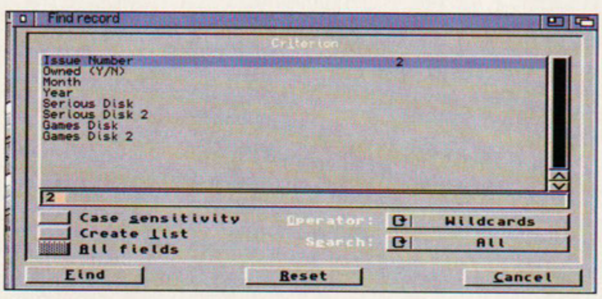
You can now click on the Edit button to make further changes to the field. A new requestor will pop up where you can change how the data is displayed. If you want it to be right justified then you can change it in the Alignment box. The Maximum and Display lengths are also set here.



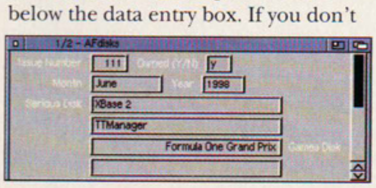
The Define requestor allows you to set up each field type and the label for it.



The Attributes requestor deals with the size of each field as well as how the data within it is placed.



The Find tool is advanced and allows you to enter different criteria for any field so you can set up a well defined search.



The *XBase* database with all the fields defined, designed and set up so data can be entered, starting with this month's disks.

As we are setting up an issue number here, we can change both to "3". This will allow digits up to 999 to be used. Create another set of fields for Month (text field, 9 max/display) and Year (amount, 4 max/display).

Now create one for Serious Disk with a maximum of 30 and then another field called Serious Disk 2. This is a spare space for noting down any secondary program on the disk, but we don't want a label for it because it will come under the Serious Disk field.

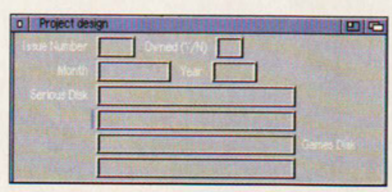
Uncheck the Display label box on the Define Project requestor. Create a further two similar fields for Games Disk, but place the label on the right rather than the left. You also need to make sure that the text is aligned to the right in the Edit Attributes requestor.

We also need a field to allow us to enter whether or not that issue is in our collection. Create a field called Owned (Y/N). It only needs to be a small amount field. If you accept this as your database and save it, you'll see that you already have a fully functioning database, but it looks stale because everything is on its own line.

DESIGNING THE INTERFACE

Go to the Design menu item on the project menu. Move the cursor down to the Year line and press the backspace key. The Year field should now appear on the same line as the Month field.

You might decide that the Owned field should be on the same line as the Issue field so it is more filled out instead of having two small lines. To do this you need to move the field up the database.



The Design mode allows you to move fields up onto the same lines and even allows you to enter lines in order to space the database out.

IMPROVE YOUR AMIGA

TTMANAGER 3.2

This is a tool manager for icons and completely replaces the functionality of the Information item in the Icon menu. A new menu item is added to the Tools menu that you should use instead. Simply click on an icon as you would before and then select the menu item. The new requestor allows you to change everything that you can change in the Information item.

FBLIT

This program is not guaranteed to work on all Amigas, though it did work on our test machine. It is a CLI command that patches various blitter operations to fast RAM, resulting in a small performance increase. Read the documentation thoroughly before continuing.

POOLMEM

This is a collection of small patches that can help reduce fragmentation of RAM and do some other rather cool stuff like patch the RAM disk so it shows the real usage instead of 100% full. All rather neat, really.

BIG BROTHER

This is another hack that disables clicking drives, cycles screens and blanks the screen. More originally, it can close all Workbench windows and record all your mouse and keyboard activity.

This is where the Position slider on the Define database requestor comes in. It allows you to move fields around even after you have defined and started entering data into a database. Accept your current design to get back to the main screen and then go to the Define requestor. Choose the Owned field and use the arrow keys to move the field up to position 2. Go back to the Design requestor and move it back onto the first line after the Issue field.

Our database is now ready. Fill out a form for this month and choose Add from the Edit menu to add a new record for last month's disks. You can now compile a full database of all the disks. When you've saved it, you might want to know what you can do with it.

USING THE DATABASE

The Action menu gives you a set of tools for sorting your data. You can search the database using the Find item. This is a powerful Find function that lets you define criteria for any or all fields. The operators let you choose if the match must be exact or includes wildcards.

For example, you could set up a search for any disks that included a program with the word "paint" attached to it since issue 50 that are in the collection. You don't need to have the database displayed in the order that you entered the records either. You can sort it to be shown in any order you want defined by the fields, so you could order it by games in alphabetical order.

Use the slider on the right of the window to move down the records. There is also a Browser that opens a new window and has a wildcard search so you could, for example, only show records since issue 100. Click on a record and it will be shown in the database window while the Browser remains open.

When you save an *XBase* database and want to reopen it, you don't use the Open command. *XBase* databases are saved out including a tooltype so you just double click on the project icon to re-open it. This program is fully featured, but the author asks you to send him a card.

Note that the documentation is in Polish, but you can get the author's address from the About requestor which is in the Project menu. AF

INSTALLING F1GP

In order to fit this game onto the coverdisks, the four original game disks have had to be compressed. To unpack them you need both coverdisks and four spare floppy disks. Boot the games coverdisk and you can unpack each disk separately to floppy disk or straight to a hard drive if you have one. The disks have been kept separate so that should you need to unpack a disk again in the future because of a read/write error or accidental deletion, you won't need to unpack the whole game. When you install disks 3 and 4, you'll need the serious disk as the archives are split onto that disk for reasons of space.

If you want to unpack both disks to a hard drive, boot your hard drive, insert either coverdisk and double click on the Install_to_HD icon. It will work to any mounted hard drive, though it was originally intended for SCSI and PCMCIA drives.

If you do install to a hard drive, either using the full method or each disk individually, you must click on the assign icon that is also installed before double clicking on the Install Game icon in the Disk 4 drawer. You cannot play the game from a hard drive without both unpacking the disks and then double clicking on the assign and installing the game. If you unpack to floppies, you can boot the game from disk 1 and see the intro or from disk 2 and skip the intro.



GRAND PRIX WORDS FOR COPY PROTECTION

Page, paragraph line, word	English	Francais	Deutsch
7,2,1,3	one	one	one
9,3,1,3	win	gagner	die
9,3,2,4	highest	plus	auf
13,1,5,2	these	fonctions	diese
16,5,1,8	the	cric	boxen
16,7,1,5	monza	monza	erste
17,7,1,1	just	juste	fahren
18,7,1,7	straight	ligne	zielgeraden
20,4,1,5	pressed	toujours	nach
20,2,1,9	around	rouge	zeiger
22,5,1,4	the	pour	ihrer
22,2,1,2	should	devez	sollte
38,1,1,1	when	lorsque	wenn
41,3,1,1	each	comme	jede
41,4,1,6	with	avec	einstellung
41,3,1,7	unique	unique	deshalb
41,2,1,3	rookie	pilote	rookie
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55,1,1,6	screen	que	den
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65,4,1,2	players	joueurs	spieler
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71,1,1,6	great	transmissions	durch
73,2,1,3	grid	grille	donnern
73,4,1,1	then	ensuite	weiter
75,6,1,10	tunnel	tunnel	dann
75,2,1,2	cars	voitures	boliden
77,1,2,3	braking	freinages	beschleunigen
77,1,3,1	take	rapides	boliden
79,1,5,1	compensated	perdue	rennstreke
79,1,1,3	bumpy	circuit	holperiger
79,1,8,1	vicious	votre	wichtigkeit
81,2,1,4	straight	droite	donnern
81,1,1,3	a	course	es
83,2,1,1	copse	copse	copse
83,1,3,4	bend	comme	im
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85,4,1,12	brutal	lentes	brutales
87,2,1,1	roaring	vous	mit
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120,4,1,10	soft	moyens	weich
120,4,1,2	can	pneus	reifen
121,2,1,4	separate	chaque	reifen
123,2,1,2	best	meilleure	ideallinie
123,1,3,1	shape	forme	kurvenwinkel
124,1,1,4	try	essayer	versuchen
127,2,1,3	stays	reste	wird
135,2,1,5	must	doit	jeden
135,3,1,1	imagine	imaginez	stellen
137,1,4,4	for	nouveau	um
137,1,1,9	accompany	il	gleichzeitig
137,2,1,8	driver	faire	doppelt
138,3,1,3	above	points	genannten
138,2,1,2	overtake	doubler	erfolgreich
146,3,3,3	he	gagner	er
147,3,1,7	top	premiers	formel
150,1,1,4	problem	aborder	ist
151,2,1,4	teams	les	grand
151,1,1,6	signed	contrat	honda
155,3,1,1	before	avant	vor
155,1,1,3	seem	sembler	als
156,1,1,1	when	quand	sobald
156,5,4,1	subsistence	prime	auslandszulage
156,1,1,3	pull	arrivent	transporter
157,4,1,2	first	moment	ersten
157,3,1,8	untimed	pas	nicht
157,4,1,5	period	tour	immer
157,1,1,4	gone	bien	geht
158,1,1,3	saturday	le	wird
158,3,1,2	track	piste	piste
158,4,1,2	three	reste	stunden
160,1,1,11	two	deux	mit
160,3,4,5	is	pied	kupplung
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NEXT MONTH

Next month we will be including the *F1GP* editor on the coverdisk so you will be able to edit your cars and the statistics and update the game as you want. Don't miss out – reserve your copy of *AF* today using the coupon on page 101.

* F1GP * OloFight * Kid's software * Linux/m68k * Superview NG * Candy

Coverdisc



AMIGA FORMAT



Welcome to the latest ***AFCD***. In it you can find all manner of things, from the world's best racing sim to some gorgeous reader contributions. Your host for this CD is Ben Vost.

The first thing to bear in mind about this month's CD is that you might have a different version of it if you live in one of the following territories: USA, Canada, South Africa or Japan. The way the CD will be different is that you don't get *F1GP* I'm afraid, the reason being that Microprose wouldn't let us do it. Sorry!

Besides that, your CD contains exactly the same mix of excellent new software and demos as those CDs intended for other parts of the world.

PROBLEMS?

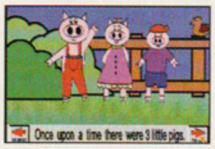
If you are having problems getting your drive to recognise *AFCD25* or newer CDs, to the point where you don't even get an icon for the disc, it may well be down to the fact that you have a CD-ROM drive that doesn't implement the CD standard to the full. The main culprit we have found for this seems to be the 2x SCSI CD-ROM drive from Power, which has the model number Sanyo CRD250. If you are having problems with our CDs and your drive is the Sanyo one mentioned (if you don't know what make your drive is, check using *SCSIMounter* or *HDToolbox*), then don't send your disc back to the duplicators for replacement – get in touch with us.

YOU KNOW... FOR KIDS!

AFCD27:-Seriously_Amiga-/Commercial/Made_For_KiDS

One thing that the Amiga has been lacking of late has been educational software for children. One company aim to rectify that and is in the fortunate position to be the only Amiga software company to be sponsored by Amiga Inc. That company is Mystique Corporation, run by Conor Kerr, and while there's not much on this CD that's actually new, you'll find an awful lot of great stuff that hasn't been seen for some time.

From simple pattern matching games to learning Japanese, there's a wide range of different topics to keep both children and grown ups busy.





Some great educational software, for kids and adults, from Mystique Corporation.







The only game to star our very own Nick Veitch, cunningly disguised behind a bowler hat and fake eyepatch.

JOIN THE UNIX BRIGADE!

AFCD27:-In_the_Mag-/Linux

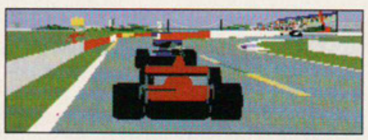
Amiga Format has long championed alternative operating systems, from our emulations column to our Unix tutorial series, and following requests from readers to keep adding Unix types to their portfolio, we hereby present Linux/m68k. Thanks aplenty to both Chris Livermore and Alan Buxey from AmigaSOC for sorting it out for us.

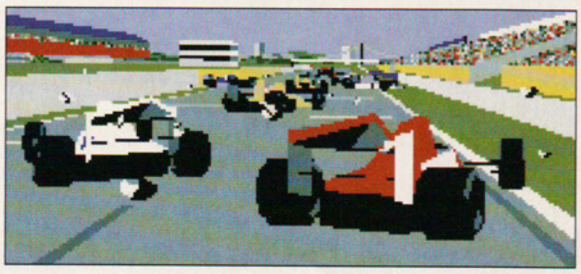
Linux is probably the best-known

F1 GRAND PRIX

AFCD27:-CoverDisks-/F1GP

We've squeezed the full version of this seminal Formula 1 sim onto our CD this month (unless you live in Japan, Canada, South Africa or the USA – sorry!). Our guide starts on page 26.





The best racing simulation available on the Amiga, and it's all yours! See pages 26-29 for some top tips to get you driving like a pro.

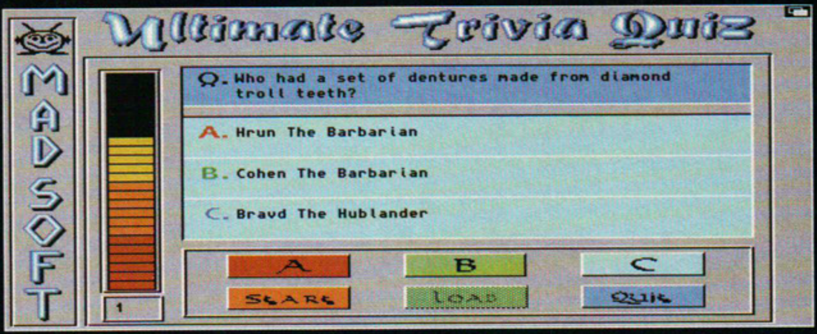


Factory * **HD installers** * Saku 98 * **Doom & Descent** * Soliton * **NES Emulation** * HighGFX *

Your Stuff! -ReaderStuff-

With over 190 million bytes of your stuff to look through, finding the winner for this month's reader prize was difficult. Should we give the prize to Tim Quigley for his quizzes on *DiscWorld* and *Red Dwarf*? We liked it, but no. We've seen it before and, if I remember rightly, we gave him a prize for it too.

So should we give it to Bernard Cain? His business card software is getting better all the time but it's still not a top notch utility, hindered by the fact that it's obviously an Amos creation. Keep plugging away with it though, because it keeps on getting better.



Tim Quigley's great quiz on *DiscWorld* (above) and *Red Dwarf* just missed out on the £50 prize.

Bill Carr's games might be a nicer version of ones we had in Reader Games, but I wouldn't know since he didn't compile them and I don't have the requisite copy of *AmosPro* needed to run them.

£50 AF Winner!

The answer just has to be Craig Danes. Even though his AmigaGuide didn't work at first (it works now, so you should thank Uncle Nick, or at least buy him a pint with your winnings), it contains details of absolutely loads of hardware projects you can do for your Amiga. Be warned that some of them do require an element of expertise with a soldering iron, and neither Craig nor our good selves are willing to take responsibility for your work.



Some great hardware projects, but be warned – if something goes wrong, it's not our fault!

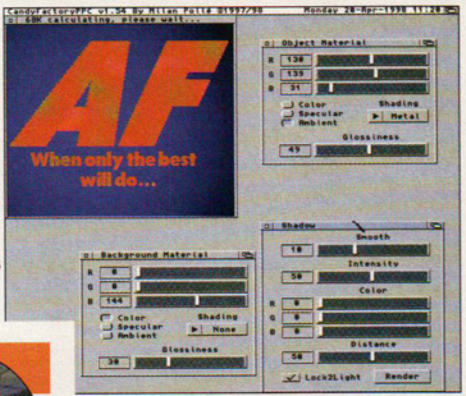
form of Unix freely available today, thanks to its easy availability on a wide variety of platforms and its wide host of people working to keep it upgraded across the world.

The version we have on our CD this month is one of the most stable implementations of Unix available for the Amiga, so you should have no trouble with it, especially since we have included an in-depth installation guide and FAQ for you to browse as well.

SWEET AS CANDY

AFCD27:-Seriously_Amiga-/Shareware/Graphics/CandyPPC

Candy Factory is a bit of an oddity. The author was inspired by the Alien Skin plug-ins for *Photoshop* and wanted to offer the Amiga something similar. Even if you don't have a PPC card you can still play around with this because it has versions for all sorts of processors in the drawer (and none of them work directly from the icon, so don't get put off by that – simply open a Shell and start it from there with a stack of 65536, or put it on your hard drive and do some renaming so that it works).



Get some rather odd effects with this *Photoshop*-inspired Shareware, suitable for several different sorts of processors.

The only difference between the PPC and 68K versions is the fact that the PPC version is supposed to be "real-time", showing you your modifications without having to wait for them to render. However, it's pretty speedy even with the '040 on my machine.

There is a limitation at the moment in that it only works with 320x256 mono IFF ILBM files, but I'm sure that this will be resolved in the near future.

DOOM AND GLOOM

Well, *Doom* and *Descent* actually. But *Descent* is kinda gloomy so that's okay. Anyway, why should I justify my headlines to you guys? Aaaanyway, we have the very latest versions of all the *Doom* and *Descent* ports on our CD this month.

Don't forget to fill in your registration card when you buy the full version from some PC games software shop and put that you have an Amiga – that'll bamboozle them.





Blow up nasty pink blobby things with the very latest *Doom and Descent* ports available.





Continued overleaf ➡

At your fingertips

GET IT ON
AFCD27:-ScreenPlay-/HD_Installers

If you're still having to boot from floppies for some of your games, it might be time to start using the HD installers that are on our CD every month.

This month's selection includes *Midwinter, SmashTV, FighterBomber* and *Strider II.* You'll also find updated versions of installers for plenty of other games too.

LOADSA NES
AFCD27:-Seriously_Amiga-/Shareware/Emulation

This month we not only have *CoolNESs* and *darkNESs0.24* for you to play with, but also a new utility called *GoldNEST* which is an editor for NES ROMs. The Nintendo connection continues with a new version of *Wzonka-Lad,* the bizarrely-named, but very good, GameBoy emulator, in a brand new version for you.

I WANNA GET HIGH, SO HIGH
AFCD27:-Seriously_Amiga-/Shareware/Hardware/highgfx

It's often been said that the Amiga's screenmodes really suck for anything useful these days. Sure, they're still useful for video, but let's face it, how many of us really spend all the time on our Amigas messing with video? No, the truth of it is what we really want is a nice 800x600 mode that isn't as flickery as Mr. Flicky of Flicksville. In fact, *HighGFX* even promises screenmodes of 1024x768 from the standard AGA chipset. Is there a catch to all this? Well, yes, of course.

Firstly, you're going to have to have a multiscan monitor capable of syncing to 54Hz and 22KHz. Secondly, you're going to want to have a fair bit of chip RAM free, so none of those pretty backdrops (unless you just don't want to run anything else apart from Workbench).

HOW'S THE VIEW?
AFCD27:-Seriously_Amiga-/Shareware/Graphics/SViewNG

← While a lot of people are already using *Superview,* it comes as a constant surprise to me that there are a lot who've never even tried it. That goes double for PPC owners since Andreas Kleinert (the author) has made a special effort to fully support the new processor, one of the few programmers to do so right now.



Probably the most interesting upgrade of this version for me is an ARexx script that lets you use any of the *Superview* loaders for *PageStream,* to make up for the decidedly anaemic amount of graphic file formats it currently supports. If you already have it installed, make sure you read the instructions as a lot of the old format modules won't work with this new version because of its heavy ties with the PowerPC.



SAKU 98
AFCD27:-In_the_Mag-/Saku98

Finland's quite a funky place to be right now. Although it has a language incomprehensible to neighbours in Norway or Sweden, and a climate that would make a polar bear shiver, it is a hotbed of Amiga activity. So much so, in fact, that when an Amiga user group decided to have a show, they were important enough to Amiga International to get good ole Petro T. up to the chilly north to give a speech.

We've got that speech and the following Q&A session in MP3 format for you on this month's CD, and you can bet that the quality will be somewhat better than my tape recording from Cologne. We've only sorted the files out with one MP3 player this time. If you have trouble with it, remember that this sort of audio file requires a heavy processor load, so your machine might not be up to the task.

You may want to try a different MP3 player and you can find several on *AFCD23* in the -In_the_Mag- directory.

ALL ALONE?
AFCD27:-ScreenPlay-/Shareware/Soliton

Some time back, everyone raved on about *Klondike III* as the best implementation of *Patience* on the Amiga, but it had some serious flaws, namely that it would only work on AGA machines and on a standard screenmode, so no running it on a graphics card for you.

Along came a *Patience* game that offered editable cards in the *Klondike* fashion but suited almost any machine. That game was *Soliton* and the author has just kept on making it better. Now you can drag cards visually between piles and double click on them to make them go where you want and more.

I know it seems somewhat sad to get excited by a card game, but this really is excellent MUI programming.





POP GOES THE DOPUS!
AFCD27:-Seriously_Amiga-/Shareware/Workbench/-DOpus-/POP3-Module

If you're online and you have DOpus Magellan, you're probably already really pleased with the fact that you can use the built-in ftp.module to get files from around the world inside DOpus (just wait until you see the new module!).

Now an enterprising soul has decided that it would also be quite nice if you could see what emails you have waiting for you on the server and delete them as desired. The module goes into your DOpus5:modules directory as usual and the ClassAct GUI comes up when you use the DOpus Shell (or other means) to call it up so you can configure the module as you like.

This means you'll need a proper installation of the ClassAct gui to make this work properly, along with the extra class that this module installs.

COME ON OVER HERE...
AFCD27:-ScreenPlay-/Commercial/OloFight

We haven't seen a new, straightforward beat-em-up game for a while now on the Amiga. With all the fuss over *Tekken 3,* people tend to forget that we have *Capital Punishment.* Okay, so it's not 3D, but *Olofight* is, kind of.

The fighters involved have all been modelled in 3D and then rendered, much like that execrable piece of software, *Rise of the Robots.* Unlike that game, it looks as though *Olofight* really has something to offer, with hundreds of frames of animation per character (although we think it could do with a few more), and special moves that are cunningly simple to access, even on the Amiga's standard single-button joystick.

Give it a go – you only get one set of fighters but it's still a laugh.



Some top, beat-em-up action with *Olofight,* with ace modelled and rendered characters – like *Rise of the Robots,* only this is good.

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AF 111 – JUNE 1998

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- 3.5" 3-Way 40-pin

IDE Cables £9.95



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- Cable, IDE Fix 97, 120MB disk
- 4 Way IDE buffered interface

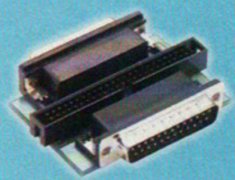
LS120 External £149.95
LS120 Internal £129.95
LS120 Internal no IDE . . £95.95
LS120 Disk £12.95



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- Power Zip Tools
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- 4 Way IDE buffered interface

Internal Zip Drive £149.95
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Int. SCSI Adaptor

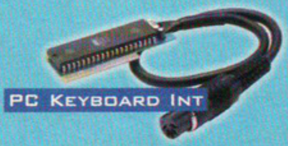
- For the Power Tower
- Suitable for ext. connection
- Up to 7 devices internal
- Fits Viper Mk5 or any other SCSI device for int. connection

Int SCSI adaptor £19.95

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Zorro (5PCI, 2ISA, 2 video slot option) £149.95
Zorro III (5PCI, 2ISA, 2 video slot option, A4000 CPU slot) . £319.95
PCMCIA V adaptor (allows Squirrel to be fitted internally) . . £19.95
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- A1200 2MB 020 14.3MHz
- AGA Chipset
- Software

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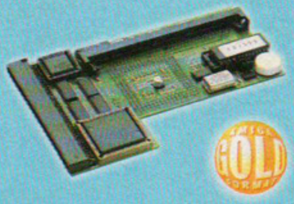
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- FPU optional

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Inc. FPU £199.95



Apollo 68040

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- A1200 68060 Accelerator

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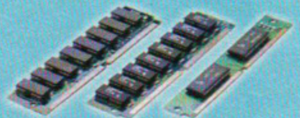
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- Fat Agnus slot to fit mini-chip

Viper 520CD £99.95



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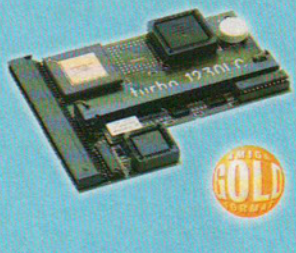
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- Compatible with IDE CD-ROM

1230 Turbo 4MB £59.95
1230 Turbo 8MB £69.95



Blizzard 603e

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- 603e PowerPC with 68K CPU
- No SCSI, cannot be upgraded
- Up to 128MB RAM

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160MHz inc 040/25 SCSI £299.95
200MHz inc 040/25 SCSI £359.95



Cyberstorm PPC

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- Ultra wide SCSI-3, inc. FPU/MMU

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200MHz PPC No CPU . . £615.95
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Special FPU prices when purchased with any accelerator card.

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33MHZ (PLCC) £15
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50MHZ (PGA) £29

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- 68030 33MHz Processor
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- FPU Included, PCMCIA friendly

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A600 4MB 33MHz £85.95
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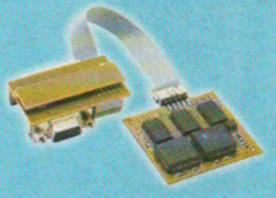


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ScanDoubler External . . . £69.95



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- Chaos Engine CD-ROM
- Oscar/Diggers CD-ROM

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- Oscar/Diggers CD-ROM

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A1200 4MB RAM

- 4MB only not upgradable

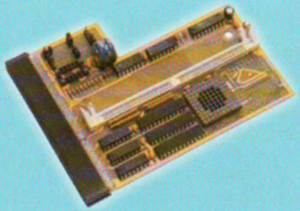
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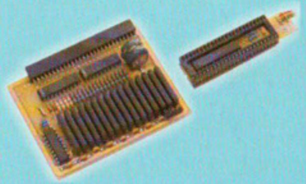
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Pinball Fantasies	AGA AMIGA'S	£6.99	See Pinball Illusions...
Pinball Mania	AGA AMIGA'S	£6.99	Silky smooth pinball simulation
Slam Tilt	AGA AMIGA'S	£17.99	See Pinball Mania...
Pinball Obsession	ANY AMIGA	£6.99	Excellent Pinball Siulation
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Skeleton Krew	AGA AMIGA'S	£2.99	3D isometric Blast'em up
Banshee	AGA AMIGA'S	£4.99	50fps Scrolling Shoot'em up
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